The Journal

of the

Louisiana State Medical Society

$4.00 Per Annum, 35c Per Copy
Vol. 105, No. 5

MAY, 1953

Published Monthly
1430 Tulane Avenue, New Orleans 12, La.

MAGNAMYCIN IN ACUTE AMEBIC COLITIS

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NEW ORLEANS

Magnamycin** is a new antibiotic which possesses activity against a wide group of bacterial, rickettsial, and protozoal organisms.[1] Since preliminary in vitro tests have shown activity against several strains of *E. histolytica*, we decided to use this agent in the treatment of acute amebic colitis. The following 4 case summaries indicate the results obtained.

CASE REPORTS

Case No. 1. C. S., a white female, age 2½ years, entered the hospital on December 2, 1952, complaining of diarrhea. Active amebic ulcers were found by sigmoidoscopic examination in the rectal and sigmoid colon. *E. coli*, *E. nana*, and ascaris were also found in the stool specimens. Magnamycin was started on December 14, 1952, 250 mg. every eight hours, on a basis of 60 mg./Kg./day. It was continued for five days. The patient vomited once on December 14, and again in December 15. Diarrhea recurred on December 17, and was of the mucus type. It persisted until December 22. Daily stool examinations were negative for *E. histolytica* after December 14. On December 26, sigmoidoscopy revealed healing of the ulcers previously seen. No amebae were found.

Case No. 2. W. H., a colored male, age 2, had had recurrent bouts of diarrhea with frequency of stools up to 15 daily for about a year. Specimens often contained streaks of blood. On October 25, 1952, *E. histolytica* trophozoites and Trichocephalus eggs were found in the stools. On October 30, terramycin, 150 mg. every six hours, was started. By November 7, symptoms had persisted and amebae were still present in the stools. Sigmoidoscopy at that time showed large amebic ulcers containing motile trophozoites. On November 10, magnamycin was started, 250 mg. every eight hours, and continued for five days. By November 13, the stools were semisolid and on November 15, sigmoidoscopy revealed vast improvement with healing of ulcers. A few tiny ulcers remained, in which amebae could not be demonstrated.

Case No. 3. W. L., a white male, age 4, had complained of diarrhea for six months. In the past three weeks it had been blood streaked. Sigmoidoscopy on February 5, 1953, revealed many amebic ulcers containing abundant trophozoites of *E. histolytica*. Magnamycin was started, 250 mg. 5 times daily, and continued for 5 days. Blood disappeared from the stools by February 8. Amebae were absent on February 13, and on February 14, sigmoidoscopy revealed that all the ulcers had healed. Repetition of sigmoidoscopy on February 26, showed no ulcers. Aspirates were negative for *E. histolytica*. Subsequent stools have been negative for *E. histolytica*, the last being obtained on April 16, 1953.

Case No. 4. H. O., a colored male, age 40, was first seen on January 19, 1953. He had suffered for over a month from recurrent episodes of diarrhea and abdominal pain. On January 21, sigmoidoscopy revealed numerous small ulcerations throughout the rectum and sigmoid as far as the 10" instrument could be passed. Aspirates revealed numerous motile trophozoites of *E. histolytica*. Magnamycin, 250 mg. every six hours, was started immediately and continued for ten days. It was followed by a course of milibis. Stools became negative for *E. histolytica* on January 22, and remained negative for the entire period of observation. On January 28, sigmoidoscopy revealed 2 remaining small ulcers. *E. histolytica* was not found in the aspirates. On February 27, 1953, sigmoidoscopy revealed a normal mucosa. The last examination, done on April 30, 1953, was negative for *E. histolytica*.

In the 4 patients treated, control of the

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**The Magnamycin used in this report was supplied by Chas. Pfizer & Co.

diarrheal symptoms was prompt. The patients were especially chosen because amebic ulcers were seen in sigmoidoscopic examination and it was possible to observe the ulcers and note healing. Prompt healing occurred along with the disappearance of *E. histolytica* from the stool specimens and the bowel aspirates. Final evaluation for parasitological cure was not carried out.

Responses with magnamycin, in this series of 4 patients, were similar to those described for terramycin and aureomycin[2-4] in acute amebic colitis. For example, Sodeman, Chaudhuri, and Banerjee[2] in treating 16 patients suffering from active dysentery with terramycin, found prompt control of symptoms in all patients, and in 7 patients examined sigmoidoscopically, from the fourth to the seventh day of treatment, observed healing of ulcers. *E. histolytica*, previously present in large numbers, disappeared from the lesions and the specimens obtained from them. Elsdon-Dew[3] and Killough and Magill[4] obtained similar results with aureomycin and terramycin respectively. These observers, however, found inadequacy of parasitological cure.

Magnamycin, in our 4 patients, appears to have had an effect upon the amebic lesions and the accompanying symptoms similar to that of aureomycin and terramycin. The results in this small series do not warrant statements of relative effectiveness of this antibiotic over terramycin and aureomycin. In one patient, however, terramycin failed and magnamycin subsequently effected healing of the ulcers. In one of Sodeman, Chaudhuri and Banerjee's patients terramycin similarly failed and emetine gave prompt results. It is possible that magnamycin may be useful in instances where other therapeutic agents have failed, as in our Case No. 2.

Dosage schedules were arbitrarily developed. The generally recommended dosage of magnamycin in adults is 2 gms. daily in divided dose. This was the schedule followed in our adult patient and was continued for ten days. In the children dosage was calculated on the basis of 50-90 mg./Kg./body weight in a manner similar to that used for terramycin and aureomycin. In the children treatment was continued for only five days. The optimal dose and the proper length of course remains to be established as does the effectiveness of the drug in bringing about parasitological cure.

In our 4 patients toxicity was recognized in only one. Patient No. 1 vomited once daily on the first two days of treatment. A mucus diarrhea appeared on the fourth day and lasted six days. The importance of these symptoms and their clear relationship to the therapy was not established. We did feel that the vomiting was related to medication.

CONCLUSIONS

Magnamycin, a new antibiotic, was used in the treatment of 4 patients with acute amebic colitis. Symptoms were controlled and amebic colonic ulcers promptly healed. These results were obtained in one patient after terramycin failed to control the disease.

Possible toxicity occurred in one patient only. It was characterized by vomiting and the development of a mucus diarrhea.

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A CLINICAL TRIAL WITH TESTOSTERONE CYCLOPENTYLPROPIONATE

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NEW ORLEANS

Testosterone cyclopentylpropionate (T.C.P.) is a new form of synthetic testosterone developed in the laboratories of the Upjohn Company. Some months ago we were given the opportunity of testing the effectiveness of T.C.P. on a selected group of patients in our office practice. This study was entirely clinical in nature, and factors, such as ketosteroid excretion, seminal fluid quantity, were not to be consid-

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ered. The effectiveness, or lack of effectiveness of T.C.P. was evaluated entirely on the results of history and physical examination.

T.C.P. was used on a total of 51 patients. These cases fell into three groups: (1) impotency; (2) male climacteric; (3) adolescent hypogonadism.

IMPOTENECY

The vast majority of our cases were in the first group—the impotent. The degree of impotency ranged from complete to minimal. There was no clear-cut end-point whereby success could be stated in this group, because there are no normal values for the coital rhythm in any class of men. The number of daily erections were not considered. Our criteria for success were increased libido, better erections, increased ability to have intercourse and better ability to prolong the act. Improvements in any or all of these criteria were classed as a successful case.

There were 47 cases of impotency in our series. Their ages varied from 29 years to 63 years. The symptoms presented were decreased libido, incomplete erections, premature ejaculation and painful or burning ejaculation, in that order of frequency. Duration of symptoms was from four weeks to fifteen years. In this group of 47 cases we achieved 38 successes and 9 failures.

It is not our purpose to enter into a discussion of the many causes for impotency. Our plan of treatment in every case was an initial complete history and physical examination. Our patients were then placed on injections of T.C.P.—the dosage varying from 25 mgms. to 100 mgms. The usual frequency of injections was twice weekly. Practically every one received general supportive measures, such as multi-vitamins.

In cases in which anxiety or nervousness was encountered, mild sedation was used. All patients in whom local pathology of the lower genitourinary tract existed were given local therapeutic measures. The most frequent findings were chronic prostatitis and posterior urethritis, seminal vesiculitis, urethral stricture, and prostatic hyperplasia. These men received prostatic massages, urethral dilatations and instillations (posterior urethra) of weak silver nitrate solution, mercurochrome or argyrol.

As stated above, these patients received T.C.P. twice weekly. Once weekly we would take an interval history, carry out any local treatment that was indicated, and make any changes in their oral medication that seemed indicated.

TABLE 1
AGE DISTRIBUTION

Age	Number of Cases	Successes	Failures
20-29	1	1	0
30-39	6	5	1
40-49	17	14	3
50-59	19	15	4
60-69	4	3	1
	47	38	9

TABLE 2
DOSAGE DISTRIBUTION

Mgm. T.C.P.	Number of Cases	Successes	Failures
25	3	3	0
50	15	11	4
100	29	24	5
	47	38	9

ANALYSIS OF FAILURES

As noted previously, 9 of our 47 cases of impotency failed to respond to treatment. We are not trying to alibi for these failures, but feel that a brief summary of each is indicated.

Case No. 1.—Age 59 years. Duration of symptoms, four years. Physical examination was negative, except for moderate prostatic hypertrophy and a low grade prostatitis. However, he had lost his wife one year previously, after a prolonged illness at home, and we are inclined to believe that he was still under fairly severe emotional trauma.

Case No. 2.—Age 59 years. Duration of trouble, two years. This patient persistently presented a marked glycosuria, but all blood sugar determinations were normal. He was faced with an unhappy home situation and in the absence of any cooperation from his wife became discouraged and discontinued treatment after a period of three weeks.

Case No. 3.—Age 55 years. Duration of symptoms, seven years. Positive physical findings in this patient were a moderate senile prostatitis and some hepatitis. He was a fairly heavy drinker. He failed to respond after eight weeks' treatment.

Case No. 4.—Age 61 years. Duration of symptoms, two years. This patient had had a transurethral prostatic resection two years previously, but stated he was having difficulty for a few months prior to surgery. He failed to respond after nine weeks of treatment.

Case No. 5.—Age 49 years. Duration of symptoms, one year. This man had a severe hypertension, and was under constant medication from his internist. It was our impression that his hypertension medications were too depressing to allow for any degre of improvement of his impotency.

Case No. 6.—Age 51 years. Duration of symptoms, one year. This man came to us from Central America. He had had some type of transurethral surgery there one year ago, and had had poor erections ever since. He never had been told what the procedure had been. Repeated cystoscopy gave us no clue. We could only find a large caliber urethral stricture and a mild prostatitis.

Case No. 7.—Age 36 years. Duration of symptoms, six months. Obesity and a moderate prostatitis were the only significant findings in this man. He was not too faithful in reporting for treatment, but failed to respond after a period of six weeks. Thyroid extract was used concurrently in this case.

Case No. 8.—Age 44 years. Duration of symptoms, eight years. Here again obesity and prostatitis were the only positive findings. He failed to respond after five weeks' treatment. There was no luetic history, and the serology was negative. However, he later responded to a series of injections of bismuth.

Case No. 9.—Age 59 years. Duration of symptoms, eight years. The patient had a mild prostatitis and urethral stricture. He had received numerous treatments elsewhere—all without success. He failed to show any improvement with injections of T.C.P., prostatic massages, and urethral dilatations.

We feel that the results obtained in this series of cases have been quite satisfactory, and believe that the response to T.C.P. is quite reliable. We encountered no instances wherein a prostatic neoplasm developed. Only one unusual reaction to the drug appeared. In this instance, the patient developed a moderate hypertension, which subsided within a few days after discontinuing T.C.P. The interesting feature in this man was that the same phenomenon had occurred when he was given testosterone some two years previously.

CLIMACTERIC

We only encountered three cases of the male climacteric in which T.C.P. was used. In all three instances the result was highly satisfactory.

HYPOGONADISM

One case of adolescent hypogonadism was treated with T.C.P. He was given 25 mgm. of T.C.P. twice weekly. His response was very gratifying and prompt. Pubic hair and definite increase in size of the genitalia were noted after the sixth injection.

SUMMARY AND CONCLUSIONS

1. Testosterone cyclopentylpropionate was used on 51 cases.

2. There were 47 cases of impotency. Of this group 38 patients (80.8 per cent) were considered to have responded successfully and 9 (19.2 per cent) were considered as failures.

3. Three cases of male climacteric were treated with T.C.P. and all responded well.

4. There was one case of adolescent hypogonadism treated with T.C.P. and the response was excellent.

5. In the whole series of 51 cases, 42 cases (82.3 per cent) were considered successful and 9 cases (17.7 per cent) were deemed failures.

6. No cases developed any evidence of prostatic carcinoma,

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EVALUATION OF NEWER ANTICHOLINERGICS IN GASTROENTEROLOGY: SECRETORY, MOTILITY, AND CLINICAL STUDIES ON DARSTINE, PAMINE, AND RELTINE

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NEW ORLEANS

Neural regulation of alimentary tract motility and secretion, a therapeutic concept stimulated by Dragstedt's revival of vagotomy has been nourished by synthesis of a progression of promising anticholinergics.

Presented at Meeting of the Orleans Parish Medical Society, April 13, 1953.

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Aided by Grants to the Medical Group Research Fund by the Dept. Clinical Research, The Upjohn Company, and the Medical Division of Sharp and Dohme, Inc.

Surgical vagotomy is a preganglionic denervation. The cholinergic blocking agents, inhibitory to the vagally denervated intestine, are therefore complemented by postgangionic action. The vagus, a mixed nerve, however, has inhibitory or adrenergic fibers and excitatory or cholinergic segments.[1, 2]

The anticholinergics, devoid of adrenergic influence yet inhibiting cholinergic action by preganglionic and postganglionic action, create alterations in gastrointestinal physiology differing from hose of a simple vagotomy. From these newer quaternary ammonium compounds, similar in action to tetroethyl ammonium compounds, we may anticipate:

1. Depressant influence on gastric motility, including peristaltic aberrations with delay in gastric emptying.[3]

2. Antisecretory influence.[4]

3. Inhibition of intestinal motility, including rhythmic contractions.[5]

Secondary to such action as a result of influence thereby on extrinsic gastrointestinal reflexes[6] may be assumed alteration in:

a. Gastroileal reflex dependent upon propagation of peristalsis from the stomach to the entirety of the small bowel by continuity.

b. Duodenogastric reflex, i. e., inhibitory gastric motility and increased pylorospasm by duodenal distention.

c. Jejunogastric reflex—similar to the duodenogastric reflex inhibits gastric emptying by duodenal dilatation.

d. Inhibitory intestinointestinal reflex producing changes suggestive of an adynamic ileus by areas of distention exciting proximal peristaltic arrest.

Psychic influences, excitatory or inhibitory, may alter any therapeutic reaction. A response pattern of two extremes has been depicted by Wolf and Wolff:[7] (1) Hypomotility, hyposecretion and mucosal blanching (cholinergic), or (2) hypermotility, hypersecretion, and mucosal hyperemia (adrenergic). Obviously, the dominance of either reaction may appreciably alter interpretations in evaluative studies such as we conducted.

It has been our impression[8] that adjunctive to a psychosomatic approach in the management of those gastrointestinal anathemas (i. e. peptic ulcer, hypermotility diarrhea, the irritable colon, and chronic ulcerative colitis) we should seek secretory and motility control through media other than symptomatic measures. Banthine, the initiator[8, 9] of a more rational approach to controlling disturbed physiology, has proved to be of specific but restricted value. Prantal,[8, 10] in evaluative studies tolerated better than banthine, has restricted value. Kirsner[10] has been a keen analyst of many of the more recently synthesized products offered for clinical evaluation. The field is exhausting in its extensiveness. Kirsner's group in their last publication summarized observations on sixteen of the newer compounds. From a preliminary pilot study of twenty compounds we selected two of the newer anticholinergics which we felt gave the greatest therapeutic prospect.

Our present study is, therefore, restricted to a secretory, motility, and clinical response evaluation of darstine and pamine. Reltine, a tertiary amine, selectively an efficient antispasmodic anticholinergic of unusual biological stability, was the third partner in the study.

The survey was conducted under as identical circumstances for each drug as was achievable.. Darstine was available to us early in 1952. The pattern of evaluative study established in its incidence was therefore carried over in turn to pamine and finally to reltine.

DARSTINE

Compound o. c. 1052-1575, (Sharp and Dohme), chemically titled 5-methyl-4-phenyl-1-(1-piperidyl)-3-hexanol methobromide is pharmacologically an effective anticholinergic. A histamine and mecholyl antagonist it is accredited with selective ganglionic gastrointestinal motility and secretory inhibition yet relatively devoid of antisialogogic and cardiovascular influence. No toxicity has been attributable to the drug and metabolic studies indicate prolonged duration of biological activity.[11] Though inconsistent, it showed intragastric (75 mg.)

and intraduodenal (150 mg.) antisecretory influence in secretory appraisal by Kirsner and Palmer.[10c]

Initial evaluation was conducted in 10 patients. An intramuscular dose of 25 mg. in each instance exerted no obvious cardiovascular influence as evaluated by pulse, respiration, blood pressure, vital capacity, and double Master's electrocardiographic estimates. There was no suppression of urinary output. Mild xerostomia was complained of by 4 patients, mydriasis by 1 of these 4. Thereafter each patient was given orally 100 mg. before meals and 200 mg. at bedtime. This schedule election standardized our administration to anticipate control of the four types of entity under study. Further, it is our impression that all anticholinergics are more effective orally when given on an empty stomach. This program was continuous for fifteen days, the dose was then reduced to 50 mg. before meals and 100 mg. at bedtime. Hematologic survey, including complete blood picture, urinalysis, phenolsulfonphthalein renal function, bromsulfalein hepatic function, blood nonprotein nitrogen, and a routine electrocardiogram were done on all patients on the fifteenth and thirtieth day. These studies revealed no untoward influence from darstine on this schedule. No appreciable side effects other than mild xerostomia and mydriasis, or any indication of toxicity, were elicited.

In 5 cases a gastrointestinal radiologic study, extended through six hours, followed the initial parenteral 25 mg. of darstine. In 4 of the 5 cases there was delayed gastric atonicity, emptying with evidence of gastric widening of the duodenal lumen, and ineffective suppressed peristalsis. In the fifth case gastric emptying was normally prompt but there was definite stasis in a dilated duodenal segment. All 5 cases showed initial transit delay through an abnormally dilated jejunum. The motility influence ameliorated in the fourth hour; thereafter, there was rapid transit of barium into the proximal colon with an ileocolic reflex in 3 patients resulting in prompt defecation. Repetition of this study when the patients were on the oral medication for thirty days revealed similar consistent motility influence with less gastric and small bowel atonicity, equivalent delay in barium transit and more sustained inhibition without ileocolic excitatory defecation reflex.

Secretory studies were conducted on 10 active chronic duodenal ulcer patients not under any form of therapy. Measurement of fasting secretion in the morning with constant electric suction and collection of aspirate at 4 fifteen minute intervals was followed by the intramuscular administration of 50 mg. of darstine. After a rest period of thirty minutes aspiration was restored and 4 fifteen minute interval specimens were collected. An anacidity for this period of observation was produced in 3 of the 10 patients. In two, both volume and titratable free acid was reduced beyond 50 per cent of the control secretory period. In 3 there was an increase beyond 25 per cent of the control and in 2 cases there was no appreciable influence. (Figure 1).

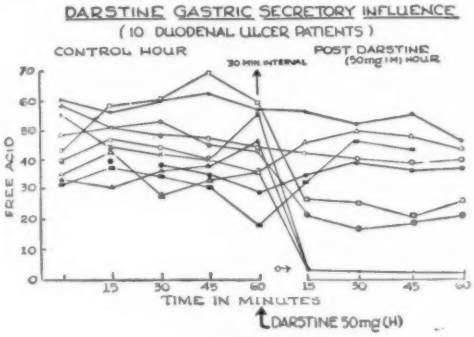

Figure 1

Clinically, 20 radiologically proven uncomplicated duodenal ulcer patients, 10 cases of functional diarrhea radiologically negative other than the roentgenologic opinion of hypermotility or irritable colon, and 10 patients with barium delineation interpretable as nonspecific colitis (with diarrhea) have been observed under darstine influence. A comparable series numerically and as far as practical in evaluation of severity has been conducted with each of the three anticholinergics and are obviously selected cases that permitted a follow up of at least four months.

1. *Duodenal Ulcer Patients*: All 20 were promptly relieved of either spontaneous or acid induced pain, within fifteen minutes, by darstine, 25 mg., intramuscularly. Pain relief endured for an average of three hours. The dietotherapy consisted of three regular meals a day devoid of obvious gastric irritants and supplemented by three intermittent feedings. Sedation was limited to barbiturates and the psychic influence of placeboes. No antacid was employed, and placeboes were given if such were requested. Darstine was prescribed 100 mg. fifteen to thirty minutes before three meals daily, and 200 mg. at bedtime.

All patients remained on the program for four months and were available for follow-up. Xerostomia in three, mild dysuria in 4, mydriasis in 4, and vertigo in 1 comprised the mild side effects that did not indicate discontinuance.

Therapeutic achievement: Symptomatic relief was complete in 12. Mildly recurrent ulcer pain occurred in 6; 2 patients who granted initial improvement thereafter claimed no benefit yet required no supplemental therapy. Radiological resurvey showed complete healing in 5, crater disappearance in an additional 4, residual irritability without other evidence of ulcer activity in 7. In only 4 was there no evidence of improvement whatever.

Functional Diarrhea: Cramping hyperperistaltic pains present in 4 patients were aborted by 25 mg. of darstine within twenty minutes. Peristaltic activity was quieted.

These 10 patients were managed on the same program other than dietary wherein intermittent feedings were omitted. Chronic intermittent or constant diarrhea for a period in excess of four months was exacted a requisite. Cooperation was excellent and the patient tabulated response from a symptomatic viewpoint; all patients adhered to the program with the common exception of paregoric for emergencies. Five considered themselves completely relieved for four months while on medication with 2 describing recurrent symptoms after discontinuance. These 5 especially complained of a gastrocolic reflex initially. Two considered themselves benefitted and 3 could appreciate no response. There was no radiologic change obvious in 8 patients reexamined other than anticipated mild hypomotility and dilatation in the proximal small bowel.

Colitis: Parenteral darstine did not relieve the low abdominal cramping pain present in 6 patients. Six of these patients had proctosigmoidoscopically established chronic ulcerative colitis; 4 had nonspecific colitis as a roentgen determination. All etiological studies were negative. On the same program as exacted for the functional diarrheas in a four month follow-up, 1 patient was completely relieved with roentgen and proctoscopic confirmation, 3 were improved, and 6 remained essentially unchanged without endoscopic or radiographic change.

Impression.—Darstine is concluded to be an effective innocuous anticholinergic with constant upper gastrointestinal motility influence, variable antisecretory action and prompt pain alleviation (in upper gastrointestinal involvement). It is an efficient adjunct in the management of peptic ulcer probably as a secretory and motility inhibitor. It is possibly effective in curtailing hypermotility in the proximal small bowel especially where a gastric component is contributant. It is doubtful if an influence on the colon can be claimed.

The largest dose we have employed in any instance was 50 mg. parenterally and 250 mg. orally.

PAMINE

Compound U.-0382, (Upjohn), stated to be epoxytropine tropate methylbromide, is reputed to be one of the most potent anticholinergics under trial. Secretory and motor influence has been definite in experimental and clinical observation.[12] An anacidity production incidence on extremely small dosage is reported with sustained inhibitory influence by larger doses.[10c] Side effects with the reputedly effective oral dose have been reported frequent and severe.[13, 14]

The 10 individuals first evaluated were given 2 mg. intramuscularly. Xerostomia, mydriasis and tachycardia occurred to a

moderate degree in each patient with faintness and vertigo in two. There was no blood pressure variation and no respiratory disturbance. Dysuria was complained of by 2 but there was no true urinary suppression. The electrocardiograms showed a sinus tachycardia in all cases but there was no influence on the effort evaluation. Thereafter, each patient received 5 mg. ante cibum and 10 mg. on retiring, continuously, for thirty days. Detailed laboratory studies as conducted with darstine showed no pertinent variation. Xerostomia, unpleasant taste, mydriasis, vertigo, dysphagia, constipation, and tachycardia occurred in all patients but they could be persuaded to continue the regime. Abdominal distention occurred in 3 and dysuria in 2. No true toxicity occcurred. Xerostomia with dysphagia was the most disturbing complaint of the average patient.

Radiologic motility evaluation after 2 mg. of intramuscular pamine produced complete gastric atonicity in all 5 cases studied with retention of barium within the stomach beyond three hours in each instance. When the duodenum and proximal jejunum filled they were dilated and showed sluggish, and at times, reverse peristalsis. Barium transit into the colon was sluggish even at the sixth hour; no defecation reflex was excited. After thirty days on oral pamine a repetition of the study revealed slightly less dramatic and constant motility inhibition and much more effective curtailment of peristaltic activity than encountered with darstine.

Secretory inhibition after 2 mg. of pamine intramuscularly was evaluated in 10 patients. Anacidity was induced in 5 patients. Two individuals showed reduction in secretory volume and hydrochloric acid in excess of 50 per cent of the control figure. One patient showed a reduction beyond 25 per cent of the control. Two cases showed a variation within 10 per cent and were therefore considered not influenced. (Figure 2).

Duodenal Ulcer Patients: Pain relief was achieved by parenteral pamine in each instance with the suggestion of more pro-

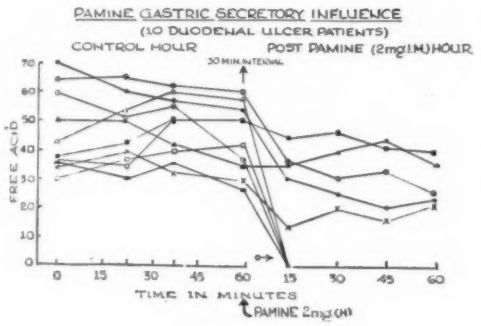

Figure 2

longed action than darstine. The oral dose schedule was 5 mg. before meals and 10 mg. on retiring. A four month follow-up has indicated persistent troublesome but not contraindicative side effects. Although xerostomia is the most constant complaint, significant constipation occurred in 13 of these patients and in 9 was accompanied by abdominal distention.

Therapeutic achievement: Complete symptomatic alleviation was claimed by 16 individuals; 3 had occasional recurrent symptomatology; 1 patient claimed no response. The radiologist reported complete ulcer healing in 10, crater disappearance in an additional 4, residual irritability in 4 and no change in 2.

Functional Diarrhea: Pain and peristalsis was promptly eliminated by 1 mg. of pamine in 5 patients so evaluated.

Of the 10 patients under observation oral pamine was definitely efficient in 7; recurrent symptoms, though of ameliorated severity, were present in 2. One patient was not improved. Actual constipation occurred in 4 patients. Radiologic evaluation showed the motility inhibition anticipated in all cases.

Colitis: Although there was some amelioration of diarrhea in 4 patients there was no instance of significant endoscopic radiologic change attributable to pamine.

Impression.—Pamine is a most potent secretory and motor inhibitor. The response in ulcer patients seems conclusively favorable. The functional diarrhea patients show an impressive improvement. Moderately severe side effects mitigate com-

paratively against pamine but do not in our opinion contraindicate its general usage.

The largest dose of pamine used intramuscular was 2 mg. Orally we have used a single dose as high as 20 mg.

RELTINE

Compound o. c. 1052-1678, (Sharp & Dohme) is designated chemically as 5-methyl-4-phenyl-1- (1-piperidyl-3-hexanol hydrochloride).[15] Readily absorbed on oral administration, it is metabolized slowly and may have an accumulative action. A tertiary amine, an antagonist of histamine and mecholyl induced motility, it is devoid of ganglionic blocking action and is primarily an antispasmodic. Toxicity studies confirm innocuousness; side effects are unusually mild and infrequent.

It was deemed of interest to conduct comparative studies with reltine hoping: (a) it would serve as a control; (b) reltine would indicate the motility inhibition component alone as influencing reaction; (c) darstine and pamine were not of sufficient influence to be of impressive clinical value in disturbances of colon motility.

The preliminary study in 10 patients with an intramuscular dose of 5 mg. revealed no alteration in the evaluative observation other than a single complaint of xerostomia. Thereafter, a schedule of oral administration of 5 mg. before meals and 10 mg. at bedtime was exacted for thirty days. The laboratory surveys at the two intervals indicated no untoward influence. The only side effect development in this group was transient vertigo in 3 patients.

Barium motility studies conducted after 5 mg. of reltine intramuscularly indicated a definite retarding influence. All 5 patients showed a mild degree of gastric hypomotility, delayed emptying, and moderate proximal small bowel dilatation. Transit time to the ileocecal area was somewhat extended but not beyond the fourth hour in each case. A review of these patients signified consistent efficient prolonged action by the oral administration over a period of thirty days. The motility influence at 5 mg. was not as marked or as consistent with reltine as with either darstine and pamine.

Secretory influence was not indicated in four consecutive studies after 5 mg. of reltine parenterally, or in two given 10 mg. of reltine. The secretory studies were therefore abandoned.

Duodenal Ulcer Patients: Ulcer pain was consistently, persistently (4 hours) and completely relieved by 5 mg. of reltine intramuscularly in 14 of 16 ulcer patients in acute typical ulcer pain. On a program with reltine, 5 mg, ante cibum and 10 mg. at bedtime, 8 patients have been rendered asymptomatic; 6 have improved; and 3 have persistent symptoms in a follow-up of ten weeks. No significant side effect has been recorded. In this brief follow-up, radiologic evaluation has indicated healing in 4, improvement in 6, and no change in 10.

Functional Diarrhea: During the period of study 10 patients with acute cramping diarrhea were available; all were promptly relieved by a single 5 mg. injection of reltine. In 6 individuals with chronic recurrent diarrhea all were symptomatically responsive to the oral administration of reltine 5 mg. before meals and 10 mg, at bedtime. Two cases improved and 2 remained unchanged. The radiologic studies, however, were not comparable with those of pamine and darstine since the motility change was not remarkable despite the symptomatic improvement.

Colitis: Parenteral reltine ameliorated the tenesmus present in 5 patients with chronic ulcerative colitis, was ineffective in 3 and gave some relief in 2. Of the 2 patients with the radiological interpretation of atypical colitis with spasm, 1 was completely relieved and in the other symptoms were ameliorated. There was no other symptomatic response. Diarrhea persisted. Radiologic and endoscopic findings were not appreciably changed in a four week follow-up.

Impression.—Reltine is a not too impressive motility inhibitor but possibly is an antispasmodic with greater influence on the distal small bowel and colon than is pamine or darstine. No secretory influence was obvious, yet a reasonable ulcer response was indicated.

In addition to the routine secretory study

in 8 active duodenal patients, histamine induced gastric stimulation was used instead of spontaneous secretion for the control. In 4 after fifteen minutes of aspiration, 1 mg. of pamine was given intramuscularly first, and when no inhibition of secretion had occurred in thirty minutes, 25 mg. of darstine was given. In the other 4, darstine was given first and pamine second. Neither drug abolished the histamine stimulated flow of free hydrochloric acid to produce an anacidity.

DISCUSSION

Consistent secretory inhibition to the extent of anacidity, or at least 50 per cent reduction, is not achievable with these drugs on single dose evaluation.

We plan multiple dose investigation both under oral as well as parenteral administration. The former administrative will be more practical since parenteral administration is hardly applicable to the management of the gastrointestinal entities under consideration. It is our impression that to date pamine in this limited study appears to be an efficient secretory depressant. Darstine, while less effective, gives less significant side effects and since tolerated well in increased dosage may demand more adequate appraisal. That antisecretory effect and toxicity are necessary correlants need not be true and is certainly not constantly so, in that some patients with the most side effects showed little or no secretory effect, while conversely, anacidity occurred in others without appreciable side effect. We are confused by the variability and inconclusiveness of secretory response. We are sincerely doubtful that, in humans, we can duplicate our results with any degree of consistency, with our present investigative mode.

The fact that reltine had no antisecretory influence whatever permitted it, to a degree, to have a control status. The relief of specific ulcer pain again brings into consideration the mechanism of this response which must be on the basis of an antispasmodic.

Again, as a motility inhibitor reltine was not as efficient as darstine or pamine, yet clinically gave a better therapeutic response in the management of functional diarrhea and ulcerative colitis. In view of lack of radiologic confirmation of impressive motility influence this must be again interpreted as an antispasmodic action possibly influencing "rhythmic contractions."

CONCLUSION

1. The newer anticholinergics, darstine, pamine and reltine are clinically evaluated as therapeutically efficient.

2. Darstine and pamine have variable but significant secretory influence. Our method of study is probably unsatisfactory but indicates factors beyond purely cholinergic influence.

3. Darstine appears inferior to pamine as a secretory inhibitor in this limited study. Darstine, relatively devoid of side effects on the trial dosage, deserves further evaluation at an increased schedule while intolerance contraindicates increase in pamine administration. Reltine has no secretory inhibitive influence.

4. Motility inhibition by darstine and pamine is impressive. Pamine is more potent than darstine. Reltine is not an impressive motility inhibitor. The symptomatic response of the three is however equivalent.

5. Clinically darstine and pamine are efficient drugs in the symptomatic control of ulcer pain while concomitantly achieving ulcer healing.

6. Continued study of these three products is indicated especially with oral administration since this would be the practical administrative mode.

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TRAINING FOR THE PRACTICE OF SURGERY*

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Since the principal objective of this society is to raise the standards of surgical practice in Louisiana, since many of you—perhaps most of you—have sons or daughters whom you hope to have trained in surgery, and since a large part of my work is concerned with the training of surgeons, it seems to me appropriate that I should talk to you on this occasion about the training programs available and about their various merits and demerits.

When I completed my internship there were no programs for postgraduate training in surgery, worthy of the name, south of Baltimore. Conditions were better in some other parts of the country, but were by no means ideal. For example, in 1915, Da Costa said that he could count the pure specialists in surgery in Philadelphia on his fingers. I think it would be fair to say that so far as general surgery was concerned, one hand would have been more than sufficient for Louisiana. We had a considerable number of very able surgeons, but only a very few of them limited themselves to what is now defined as general surgery.

If one chose to enter this field in New Orleans, one had the choice of a preceptorship, or a house-surgeonship at Charity Hospital. There were preceptorships available that provided ample instruction and an opportunity for observation that was of great value, but they included little or no opportunity for personal management of cases including operation. The house surgeonships gave more than ample operative experience but little supervision, and they would not be approved by any of the rating boards at this time. I think it is well to remember, now that training programs are so strictly rated by national organizations, that both of these programs produced surgeons of the first rank. We should not forget, however, that such accomplishments represented the triumph of the individual over tremendous obstacles, and that such systems, or lack of systems, could never turn out enough good surgeons to supply the demand.

Some of us (of a certain age) tend to look back with nostalgia upon this period—"the good old days that never were"—as if it were a golden age. The truth of the matter is that it was very bad; that opportunity came to few and that only a few of these had the luck, hardihood, ambition, and intelligence to overcome the obstacles and become first-rate surgeons. We must also admit that most of these had reached middle age before they "arrived."

Much of the ambition and originality with which they started out had been beaten out of them before they became really competent, and by that time increased responsibilities made it necessary for most of them to devote their entire time to the grim business of making a living and providing for old age.

*Presented at the Annual Meeting of the Surgical Association of Louisiana, November 16, 1952, at New Orleans, by Dr. James D. Rives, President, 1951-1952.

A few hardy souls made valuable clinical contributions gleaned laboriously from their own experience, but there were few opportunities for laboratory investigation available to men young enough to be productive. This state was notably sterile during the period when laboratory research was coming into its own in the field of surgery.

Now, many of us oldsters are inclined to sneer at "library" and "laboratory" surgeons. In our hearts we know that this is wrong; that our attitude is really a case of sour grapes. In the words of Montaigne "since we cannot attain it, let us rail against it."

Let us admit that this section of the country was, for a long time, largely parasitic in the world of ideas, though I think we can justly claim that we have used our borrowed ideas well.

Some of you will not be willing to accept this appraisal of the past of surgical training in Louisiana, but before you rise in wrath to contradict it, let me remind you that many of you have sons and daughters who plan to go into surgery. Do you really want them to be trained the way you were?

There are many ways to master this profession, and all ofthem have both advantages and disadvantages. Let us consider the various methods a student may use.

In the past, a considerable number of men have learned surgery alone and unaided, but it was then a much simpler field, and now it has become so complex that this method is impossible. It may be admitted that by assiduous reading, by visiting surgical centers, and by conscientious contemplation of personal experience, it is possible to become a good surgeon without formal training. But this requires high intelligence and a degree of industry rarely seen. It would be a pity to waste such intellect and quality of character in so unsatisfactory a program.

It requires either incredible stupidity, colossal egotism, or both, for a man to believe that he can originate in one lifetime all of the useful ideas that surgeons have conceived in the past 2,000 years. "Man is heir to all ages," but he must exert some energy to collect his heritage before he sets out on his career, and if he does not do so he is as foolish as would be a soldier who entered battle in the atomic age clad in a loincloth and armed with a club.

The pyramids were built with very primitive equipment and this no doubt could be done again. One must admire the ingenuity and force of character of the men who accomplished these miracles of construction without modern machinery, but it would be unbelievably silly for anyone to employ such methods in the twentieth century.

If you will agree that a reasonably quick and efficient way of training surgeons is highly desirable, let us proceed to consider the means available at this time.

THE PRECEPTORSHIP

A large proportion of the members of this society got their surgical training by preceptorship. This is an ancient method of training and many of the great surgeons of history have acquired their knowledge in this manner. There is much to be said for sitting at the feet of a master, provided, of course, that he really is a master; the pupil learns by observation the methods that have been found sound by a man of wide experiance; by direct association with a wise and understanding preceptor he acquires the knowledge that his teacher has accumulated through years of experience and study; he learns the mistakes that are likely to be made and the means of avoiding them, thus saving himself and his patients a repetition of these errors; and last but not least, he is exposed to the stimulating influence of a mature master surgeon. If this stimulation drives him to the library, to visiting other clinics, and to thoughtful deliberation upon his reading, the precepts of his teacher, and his own experience, he may finish his apprenticeship fully qualified in his specialty.

However, there are many weaknesses in such a program. The first of these is that it provides insufficient individual practice and the pupil is likely to lean upon his chief when decisions are to be made, and thus fail to learn to stand on his own two feet. He may complete such a program with-

developing sufficient initiative to carry on in a practice of his own. He is likely to get all of his opinions from above and lose his capacity for independent thought. It is possible to spend a long time apprenticed to a strong and able character and learn almost nothing, except what is handed down from on high. No matter how competent the teacher, or how enterprising the pupil, the preceptorship tends to perpetuate the weaknesses of the teacher. Neither he nor the pupil are likely to devote enough time or thought to problems in which they have little interest. For example, a man apprenticed to me would probably end up very weak in gynecology and in surgery of the bones and joints.

I myself was trained by this method, but I had the great good fortune to be apprenticed to a genuinely great surgeon who was also a magnificent teacher. A man whose mind was always open to new ideas, who never tolerated complacency, who insisted that there were many sources of knowledge and that his apprentice should make use of all of them. A teacher who could not tolerate a "yes man" and who finally, when he thought I might be becoming too dependent, pushed me out of the nest. This was the preceptorship at its best. My preceptor, as most of you know, was Dr. Urban Maes.

At its worst, the preceptorship tends to develop clinging vines and "yes men" who have no place in the specialty of surgery, which demands that final decisions be made quickly and decisively, day after day. Surgery is no place for a Hamlet, and as valuable as long thoughtful deliberation may be in other fields (even in the field of surgery before operation), this attitude of mind is out of place in the operating room, where it is frequently better to make a decision, somewhat short of the best one, immediately; rather than to make the perfect one an hour later.

The preceptorship is no longer approved by any of the major rating boards and it may be that this is necessary, for reasons which I cannot go into at this time, but it is still possible for a man to become a good surgeon by this method, and that is far more important than having a diploma upon the wall. It is by no means necessary that all surgeons be approved by rating boards, although such approval has great practical value. The quality of the work that the man can do is the important thing, and few members of the Boards or of the College of Surgeons question this. A young man who is an independent thinker and a reasonably dissatisfied pupil may become a valuable member of the profession when trained by a master full of curiosity and humility, and I hope that local surgical societies, hospitals, schools, and other organizations who hold the future of these men in their hands will continue to disregard Board qualifications in the case of individuals whom they know to be competent.

RESIDENCIES IN PRIVATE HOSPITALS

Residencies in private hospitals are numerous and have many advantages. Such a residency provides the opportunity to observe and to help in the work of many able surgeons, rather than a single one. These men will often have diverse views on important matters and will supply widely different methods in both diagnosis and treatment. This is very valuable to the student, who must learn sooner or later that it is unwise to be too dogmatic, and that there are often many good means of accomplishing the same end. He profits by the mistakes of many surgeons rather than of one, and with all of his observations he should develop methods of his own that are a composite of the best that he has observed. This can be, and often is, an excellent method of surgical training. Its excellence will depend upon whether or not the staff men are teachers and whether or not the clinical material is adequate for his own individual experience.

Many such residencies have inadequate ward services for the residents' benefit, and provide inadequate opportunity to develop personal responsibility. Too often the resident is just a poorly paid surgical assistant or a glorified intern. No one teaches him, no one directs his reading, and no one sees that he develops an adequate knowledge of the basic sciences. He is just

a slave, a serf, or a convenient source of cheap help.

At its best, the private hospital residency lacks only the university atmosphere and extensive opportunity for individual operative experience (and in a good many instances this latter deficiency does not exist.)

There is still another advantage that should be mentioned. This is that in such hospitals, the apprentice learns to handle tax-payers as well as tax-spenders. Direct contact with people who can support themselves and help support the indigent of the community is an enlightening experience that every surgeon should have, and that is lacking in many university residencies. There is a tendency in some large charity services to think that there is something degrading about treating self-supporting citizens, and this atmosphere leaves the mind of the pupil too open to the idea of state medicine.

RESIDENCIES IN LARGE CHARITY HOSPITALS

Residencies in large charity hospitals are among the most popular of all methods of training because of some very obvious advantages. They usually provide ample experience in the handling of patients and ample technical experience. The best of them are under university supervision, and are very good indeed. In such instances the faculty of the medical school provides entirely adequate supervision. They have ample library facilities; they provide teaching experience for the residents, which is of the greatest value in training; they have planned student programs including staff conferences, journal clubs, instruction and experience in the basic sciences. The resident is in constant contact with new ideas and he lives in a very stimulating atmosphere. The effectiveness of such a program is limited only by the capacity of the pupil.

It must be admitted, however, that even the university supervised programs are sometimes deficient in almost all of the phases mentioned. The chief of the service appears in some instances not even to know how ignorant his residents are. This fact, as evidenced by letters of recommendation contrasted to actual performance on oral examinations, has been one of my most surprising and distressing observations in examining for the American Board of Surgery.

There are some very glaring weaknesses in many residencies of this type. Most of them fail to give the student sufficient opportunity to observe the work of the senior surgeons. The student tends to learn operative procedures and techniques from other students, who are also lacking in experience, and they tend to develop a high degree of complacency born of ignorance. A fair proportion of them become knife-happy "hewers of flesh and drawers of blood." The outpatient clinics and emergency services of these large general hospitals make such heavy demands upon the time of the resident that they interfere seriously with his opportunity for study.

The resident tends to develop a callous attitude toward the patient, who has no alternative but to accept what he gets or go home. He tends to lose the human touch and the concept that the object of all surgery should be the best interest of the patient, not of the operator. None of these obstacles is insuperable, and I think that we can say—all factors considered—that the large charity hospital under University supervision provides the best clinical training available at this time.

THE CLINIC FELLOWSHIP

A number of large private clinics have developed surgical fellowships that are much in demand,—and rightly so. They provide all of the advantages of the large private hospital, except wide variety of method, opportunity for the individual handling of cases, and technical experience. In addition, they have teaching programs comparable to those provided by the best universities.

The only really serious disadvantages in these fellowships are the lack of technical experience and the development of individual responsibility in the handling of patients. Their most annoying deficiency is that they tend to lead the fellow to believe that he is at the fountain source of all knowledge, and that all ideas and methods

not employed there are hardly worth considering.

This is a form of provincialism that tends to close the mind, dull the curiosity, stunt the intellect and render the individual socially and professionally objectionable. At its best, this type of training is very good indeed, but it must be supplemented by satisfactory training where the opportunity for personal management of cases is provided. Beware of the so-called clinic, where the fellow is merely a poorly paid surgical assistant or intern!

SCHOOL FELLOWSHIPS AND POSTGRADUATE COURSES

A number of universities provide fellowships and postgraduate courses designed to prepare students for surgery. They provide ample opportunity for laboratory investigation and require entirely adequate reading. They provide no clinical experience worthy of mention, but it must be admitted that much facility in technical methods may be developed in the laboratory on experimental animals. I must confess that I have a very low opinion of this type of training as preparation for the practice of surgery, except perhaps for one year. I feel that laboratory investigation in surgery preceding any clinical experience is premature, and will be far less rewarding to the surgeon than would be the same type of work after he had had a moderate amount of clinical experience. I hasten to add that if the fellow is looking forward to a career as an investigator or as a teacher, this type of training makes more sense.

It tends to develop an unwarranted reverence for the printed word and an almost complete ignorance of the vast amount of surgical knowledge that never gets into print. It is a form of vicarious experience which develops the idea that the execution of surgical procedures is very easy and hardly worth the attention of learned men. These fellowships are a breeding ground for intellectual snobs who lead such cloistered lixes that they are entirely unprepared for the realities of actual practice.

At best, they may stimulate curiosity and a critical faculty. They teach fundamentals by actual experience rather than vicariously. One or two years of such training may be of value, especially for a teacher, when topped off with clinical training under supervision.

THE UNIVERSITY HOSPITAL RESIDENCY

The residency system of teaching surgery originated in University Hospitals, and it is in such hospitals that the very best training is obtainable, even now, especially for individuals who look forward to a teaching career. I have no personal experience with the rarified intellectual atmosphere of such residencies, but it is written that "by their works ye shall know them," and I know a large number of men who were so trained.

At its best, the university residency is one of the best methods of training now available. Ample facilities for research are provided under the direction of experienced investigators who can guide the uncertain feet of the beginner. Basic science training is usually of a high order. Clinical work is closely supervised and is of superior quality. The resident usually has ample time for study and the facilities needed to make such study effective. Adequate clinical experience with graded responsibility is available, not in the quantity usually found in a large Charity Hospital, but so selected that not much time is wasted in the useless repetition of commonplace procedures. The resident lives in a stimulating atmosphere of ideas and intellectual curiosity, and if he has sufficient capacity there is no limit set upon his development.

But even the university residency has its deficiencies. It is geared to the exceptional student. It tends to develop intellectual snobbishness and provincialism. The effectiveness of the entire program depends upon the head of the department—his strength and his weaknesses. A few of these residencies provide inadequate clinical experience, especially when the teaching staff is full-time and likes to operate. The clinical material is selected to fit the interests of the professor and may be very lopsided in its emphasis. And finally, the professor may be so wrapped up in his own career that he pays little attention to the

work of his residents. He may favor worshippers and "yes men" rather than potential superiors.

THE STUDENT

In the final analysis, the effectiveness of all of these training programs depends upon the student. A young man of sufficient ambition, initiative, intelligence and industry can overcome the deficiencies of any method of training whatever. Conversely, even the best program will fail if the student lacks these qualities. Therefore, the selection of the student is one of the most important factors in the entire program. The fact that a father wants his son to be a surgeon, the fact that his uncle gave money to the university or is on the Board of Directors, the fact that his family, no matter how large, voted right in the last election, that his tribe has or has not lived in the community so long that the memory of man "runneth not to contrary," the fact that he is a nice boy, and good to his mother—none of these things has any important bearing upon his fitness for surgical training. It should be remembered, however, that this works both ways, and that the fact that the candidate is the son of a very objectionable politician does not necessarily mean that he will not make a fine surgeon.

For better or for worse, the training of these men has been entrusted to the staffs of approved hospitals, universities and clinics. Since these staff men have the very grave responsibility of training the future surgeons of the country, they should have the right to select the material that they will work with. It is still true that you cannot make a "silk purse out of a sow's ear," and they should not be asked to try. They are not supermen,—although some of them seem to think they are,—but the vast majority are earnest, conscientious, capable men who like to see young men grow to a stature greater than their own, and in this way they achieve a sort of anonymous immortality. If any of these men prove unworthy of your trust they should be removed from their positions, but so long as they do not, they should not have their hands tied.

I hope I have made it clear that there is no such thing as an ideal training program, and no such thing as an ideal student. All of the training systems available at this time are imperfect. I confidently expect that they will improve from year to year, and I devoutlly hope that we shall never be satisfied.

POLYCYTHEMIA VERA WITH GASTROSCOPIC OBSERVATION

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NEW ORLEANS

The association of gastrointestinal symptoms and polycythemia has frequently been noted in the literature. Clinically, peptic ulcers have been reported four times more commonly in patients with polycythemia than in normal individuals.

The following case is illustrative of the ulceration occurring in the upper gastrointestinal tract in polycythemia vera and includes an analysis of gastroscopic findings. A brief summary of the history and physical findings in this patient, follows.

CASE REPORT

A white male, 54 years old, was first seen on October 27, 1950, presenting a complaint of abdominal distention and vomiting two to three hours subsequent to meals. The vomitus did not contain blood. There was a history of a chronic nonproductive cough and a weight loss of 22 pounds.

Physical examination revealed a patient of emaciated appearance, with a markedly plethoric complexion. Temperature was 98°, pulse 96, respiration 20, and blood pressure 124/88. The heart and lungs were normal. Palpation of the abdomen revealed no abnormalities with the exception of tenseness in the epigastrium which could be ascribed to voluntary rigidity. On rectal examination, there was found to be a 1 to 2 plus benign enlargement of the prostate.

Microscopic examination of the blood showed hemoglobin 18.5 grams, (128.2 per cent); red blood count 7.28 million; white blood count 9,950 with a differential of neutrophiles 79 per cent, lymphocytes 20 per cent, monocytes 1 per cent. Hematocrit reading was 65 with a mean corpuscular volume of 90 c.mm., a mean corpuscular hemoglobin of 25.4 gamma, and a mean corpuscular hemoglobin concentration of 28.4 per cent.

From the Southern Baptist Hospital, New Orleans.

TABLE 1
BLOOD STUDIES

DATE	BLOOD COUNT	HEMOGLOBIN	HEMATOCRIT	REMARKS
11-24-50	6.62	17.5 Gm	64	Vomiting and abdominal distention
11-30-50			61.5	500 cc blood removed
12-2-50			55	500 cc blood removed
12-6-50	6.29	16 Gm	55	500 cc blood removed
12-8-50			47.5	500 cc blood removed Relief of symptoms
12-13-50	4.88	12.9 Gm	45	500 cc blood removed Asymptomatic
12-16-50	4.25	12.5 Gm	44	500 cc blood removed Asymptomatic
12-28-50				Therapeutic dose radio-active phosphorus
1-16-51	4.98	14.6	29	Asymptomatic
2-20-51	4.62	13.5	28.5	Asymptomatic
3-20-51	4.84	14.6	30	Asymptomatic
4-17-51	4.80	14.5	36	Asymptomatic
5-15-51	4.81	13.6	30	Asymptomatic
6-12-51	4.78	13.6	31	Asymptomatic
7-25-51	6.48	13.8	49.5	Nausea and vomiting 500 cc blood removed with complete relief of symptoms
7-28-51	5.08	12	41.5	Asymptomatic
8-7-51	4.52	13.2	31	Asymptomatic
9-4-51	4.83	13.5	28	Asymptomatic
10-9-51	4.67	13.6	29	Asymptomatic

Blood chemistry showed nonprotein nitrogen 37.5; uric acid 2.7; dextrose 110. Serological findings were negative.

The gastrointestinal examination revealed a stomach of a very long J-type, containing a moderate quantity of fasting secretion which interfered with visualization of the mucosal relief. A narrowing of a very short segment in the prepyloric region, approximately 3 cm. above the level of the pyloric canal, was eccentric and apparently due to a deep, spastic incisura on the greater curvature side. (Fig.1) The mucosal relief in this area was markedly disoriented, but was still maintained and no crater was visualized. Nothing else suggesting intrinsic disease was recognized.

On November 24, 1950, gastroscopic examination was performed and showed the antral mucosa to be deep red with several small, greyish white, depressed mucosal lesions. Pars media and fundus appeared normal. Diagnosis of chronic hypertrophic ulcerative gastritis was made.

Beginning November 29, the patient was phlebotomized serially until an hemotocrit reading of 45 was obtained on December 12; a total of 3,000 cc. having been drawn. Accompanying the reduction of the hematocrit to normal, the patient significantly become asymptomatic.

On December 28, a therapeutic dose of radioactive phosphorus was administered on the advice of members of the Pharmacology Department of the Lousiana State University School of Medicine, who specified that for proper treatment with radioactive phosphorus, the hematocrit reading should be reduced to within normal limits.

Fig. 1. Stomach showing eccentric narrowing of a very short segment in the prepyloric region.

Roentgenologic examination of the stomach on

December 27, revealed a healing antral gastritis with the antral shortening as noted previously. This agrees with the opinion of most workers that phlebotomy significantly alters the ulcerative gastrointestinal manifestation of this disease, but is also indicative of the fact that the infiltration of the antrum persists in remission. At this time the blood count was 5.07 million with an hematocrit reading of 30 per cent.

The patient continued in apparent good health and was asymptomatic until July 24, 1951, when an aggravated recrudescence of the initial symptoms occurred. The blood picture at this time revealed a 6.48 million red count with an hematocrit reading of 49.5. A single 500 cc. phlebotomy completely alleviated the symptoms. The patient has been examined since then at monthly intervals and found to have a normal blood picture and remission of the disease.

The gastroscopic findings in this case are similar to those reported in the literature. Baronofsky *et al*[1] reported a case of a 52 year old white male, in which gastroscopic examination showed hypertrophic gastritis, dark red color of the mucosa and superficial erosions similar to the ones noted in the case here reported. (Fig. 2)

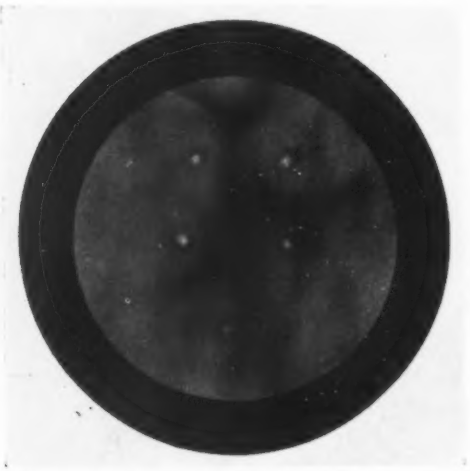

Fig. 2. Gastroscopic appearance in case of polycythemia vera showing multiple ulceration in antral segment.

Experimentally it has been promulgated by Wangensteen and others that the hemoconcentration of polycythemia does aid and abet the ulcer diathesis. The exact mechanism is unknown, but it has been shown by Trevan[3] that with increased hematocrit readings, the viscosity of the blood increases in almost a straight line. This, coupled with Pouiseville's demonstration that the rate of flow along narrow passages is inversely proportional to viscosity of fluid, would suggest stasis. As a matter of fact, it has been shown that in human beings with polycythemia vera the blood flow is greatly reduced. Stasis of blood will lead to poor nutrition of tissues. The gastric mucosa, in consequence to this stasis, readily succumbs to the erosive action of acid peptic digestive juices.

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MEDICAL SLIDE RULE

ESPECIALLY DESIGNED FOR MEDICAL AND PHYSIOLOGICAL LABORATORIES

J. T. PETERS, M. D.*

SODUS, NEW YORK

The need for a special slide rule, designed to facilitate calculations pertaining to medical and physiological laboratories, has been apparent for a long time. A great deal of time is saved, accuracy increased, and many mistakes are avoided in the use of the slide rule described in this paper. Direct readings can be made up to 10,000 by the use of a four cycle arrangement—1 to 10, 10 to 100, 100 to 1000 and 1000 to 10,000—which takes care of the proper placing of the decimal point. A slide rule of this design does not appear to be on the market.

Those unfamiliar with the basic use of a slide rule would do well to read one of the instruction booklets, available at almost any bookstore, paying particular attention to the explanation of the logarithmic scale. To those familiar with a slide rule, the ad-

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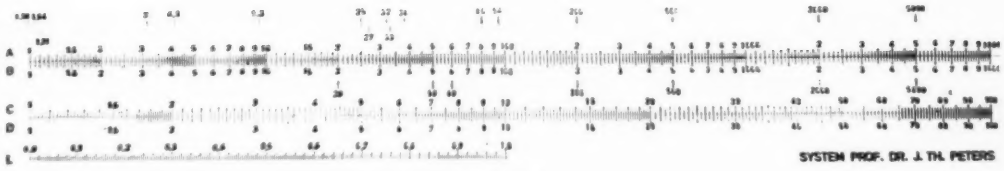

Figure 1

vantages of this special slide rule will be apparent from the following examples, described for a number of calculations frequently made.

HEMATOLOGY

The important mean corpuscular values described, in 1932, by Wintrobe, are frequently miscalculated with the result that diagnostic difficulties are increased rather than valuable information gained. On the slide rule the upper and lower limits of the mean corpuscular values are clearly marked, so that they can be seen immediately and without reference to charts, if the result is within normal limits. As examples, a few of such formulas follow, whereby these abbreviations are used: M = mean, C = corpuscular, HGB = hemoglobin, (in gm. %), HT = hematocrit, being the volume percentage, determined with the aid of a hematocrit tube, VOL. = volume, CON = concentration, Q = number of millions of red cells per cu.mm.

Then is M.C.HGB. = $\frac{10 \times HGB}{Q}$: M.C. VOL.=$\frac{10 \times HT}{Q}$

M.C.HGB.CON.=$\frac{100 \times HGB}{HT}$

For checking the color index (C.I.) should be added: C.I. = $\frac{HGB}{3\ Q}$. The normal limits of these values, which are printed on the special slide rule, are for the M. C.-HGB = 27-32 micro-micrograms; for M.C.-VOL. = 80-94 cubic microns; for the M.C.-HGB,CON. = 33-38 percent; for C.I. = 0.98-1.04.

ELECTROCARDIOGRAPHY

1. *Heart Frequency.* I saw in several heart stations, that it was a custom to estimate from a view on the electrocardiogram the heart frequency, in order to eliminate a time-consuming calculation. Overrating or underrating of the heart frequency was an every day occurrence. For that reason I printed on the special slide rule a mark at 25. Then it takes only a few seconds to read the exact frequency, if one uses the following simple method: Count the vertical lines between two successive R-Peaks. That number = a and the distances between the lines = 0.04 sec., then is x the heart-frequency in the formula $\frac{25}{a} = \frac{x}{60}$ If the distance between two R's has to be read in other units, only the number 60 has to be changed; whereas the figure 25 can stay and the mark on the slide rule can be used.

2. *Calculation of the QT interval.* There are several formulas for this calculation, one of them with a logarithm. All of these formulas can be easily calculated with the aid of the slide rule. However, the formula which is by far the most used, is that described by Bazett in 1918. If c = the cycle-length in seconds, then is the Q-T interval = 0.37 $\sqrt{}$ c for adult males and children and 0.4 $\sqrt{}$ c for adult females. The normal limits are 0.36 - 0.44 seconds for pulse frequencies between 57 and 92. With the slide rule it requires only a few seconds to calculate the length of the Q-T interval, which may give important information about the presence of myocardial damage, about calcium and potassium levels in the blood, and so on.

CALCULATION OF CALORIES IN DIETS

Nobody ignores the time-saving value of the use of slide rules for the calculation of calories in diets for the treatment of diabetes or for reducing diets. I decided to double the number of cycles on this special slide rule, because I saw several times that those who are not yet sufficiently accustomed to the use of slide rules, made bad mistakes by misplacement of a decimal

point. The highest figure on the slide rules which are on the market at the present time, as far as I could ascertain, is 100. Most of the figures of the number of calories in diets are above 100. On the special slide rule figures can be read up to 10,000, which makes it possible that every number of calories can be read immediately. In addition, the factors 4.1 and 9.3 are marked, so that it takes only a few seconds to read accurate results. At the same time, inaccuracy by the use of the simplified factors 4-4-9 is discarded. That this inaccuracy is often greater than would be expected is seen if one calculates the total calories of a diet. Example: A diet contains 295 gm. carbohydrate, 95 gm. protein and 110 gm. fat. It will produce 4.1 x 295 = 1209 calories, from the CH, 4.1 x 95 = 389 calories from the P., and 9.3 x 110 = 1023 calories from the F. The sum of these calories being the total calories, is 2621 calories, whereas the factors 4-4-9 would only give as result 2553, a difference of not less than 68 calories.

ADDIS COUNT

I saw that with no formula many mistakes were made with calculations of this count, which Addis described in 1925. Often astronomical numbers were calculated. I put a special mark on the slide rule, namely 1.11. Example: Suppose the quantity of urine in twelve hours is 300 cc.; suppose 0.8 cc. remained in the centrifuge tube; suppose further that 9 red cells from 10 cc. well shaken urine are counted in 9 large squares of the hemocytometer. Then the Addis count is 1.11 x 300 x 0.8. x 9 x 100. One reads on the slide rule in a few seconds: 1.11 x 3 x 80 x 9, that is, 2500 and multiplies this by 100. The Addis count is then 250,000 red cells in the twelve hour sample.

CALCULATION OF THE RENAL FUNCTION TESTS

Also for the calculation of these formulas, the four cycles of this special slide rule, make the readings of the results much quicker and much simpler for persons who are not accustomed to work with slide rules. The frequent decimal point mistakes are excluded. As examples, to show immediately the great time-saving value of the use of the slide rule, the following are chosen:

1. Homer Smith Formulas. *Glomerular Filtration Rate.* Example of a case, examined with mannitol, where was found: the plasma concentration of mannitol = 1.0 mg/cc; the urine-volume/min. = 3 cc/min.; the concentration of mannitol in urine = 40 mg/cc; surface-area = 1.7 sq.m.; standard correction to surface-area = 1.73 sq. m. Then the *Glomerular Filtration Rate*, corrected to standard-surface-area, is:

$$\frac{40 \times 3}{1.0} \times \frac{1.73}{1.70} = 122 \text{ cc/min.}$$

Effective Renal Plasma Flow. Example of a case, examined with para-amino-hippurate (PAH), where was found: the plasma concentration of PAH = 0.02 mg PAH/cc; the urine-volume/min. = 3 cc/min.; the concentration of PAH in urine = 3.77 mg PAH / cc. Then the *Effective Renal Plasma Flow*, corrected to standard surface area, is

$$\frac{3.77 \times 3}{0.02} \times \frac{1.73}{1.70} = 574 \text{ cc/min.}$$

Just as quickly the value of the *Tubular Secretory Mass* can be calculated.

VAN SLYKE'S UREA CLEARANCE TESTS

Example of a case, where the volume of urine was below 2 cc. per minute (standard clearance) namely 0.81; the concentration of urea nitrogen in blood = 10 mg. per 100 cc. Then the urea clearance is:

$$1.85 \times \frac{600}{10} \times \sqrt{0.81} = 90\%$$

PETERS IODO-SECRETORY INDEX

(In the Archives of Internal Medicine of February 1941, Vol. 67 pp. 345-371, I proved that Van Slyke's urea clearances are often not reliable measurements of the renal function. Therefore I described in that article an iodo-secretory index). Example of a case: (Mr. H.) The urine/min. volume was less than 2 cc, namely 1.26; the iodine per 100 cc. of urine = 260 mg; the iodine per 100 cc. of blood = 11.8 mg; the estimated weight of the renal parenchyma = 250 gm. Then the iodo-secretory index is

$$40 \times \frac{260}{11.8} \times \sqrt{\frac{1.26}{250}} = 67.$$

Within one minute this formula can be calculated with the special slide rule.

CALCULATION OF THE BASAL METABOLIC RATE

If no slide rule is added to the apparatus, used for determination of the BMR, then

the following calculation can be made: If the actual consumption of oxygen per minute = 255 and the normal consumption of oxygen for the same age and sex = 280, then the difference between these values = 25. The formula can then be written BMR = $\frac{25 \times 100}{280} = -9$.

PROTHROMBIN CONCENTRATION

Example: If clotting occurred with patient's blood after 120 seconds and in blood of normal persons after 30 seconds, one may write:

$\frac{30}{120} = \frac{x}{100}$ x being the prothrombin concentration in percent.

CALCULATION OF SURFACE AREAS

Especially for these calculations, but also for others, I printed also the logarithmic scale on this slide rule. The logarithmic scale in addition to the 4-cycles on this slide-rule, makes it very simple to calculate such formulas in the shortest time. A few examples of these formulas show the need of the logarithmic scale:

Meeh-Dubois' formula of surface area in man: If A = square cm., W = Weight in kiligrams, H = height in cm., then $A = W^{0.425} \times H^{0.725} \times 71.84$.

Meeh's formula of surface area in dogs: If a = square meters and kg = kilograms, then is $a = 112 \sqrt[3]{kg^2}$.

THE CROSS-EYED CHILD
ETIOLOGIC FACTORS IN HIS DEFECT*

GEORGE M. HAIK, M. D.
GEORGE ELLIS, M. D.
NEW ORLEANS

In order to understand fully the various etiologic factors responsible for crossed eyes, it is necessary to understand the essential steps in the development of binocular vision. There are two controlling mechanisms: (1) the extraocular muscles, which potentiate the movements of the eye; and (2) the sensory psychic visual apparatus, which is responsible for the formation of images on the retina, their transmission to the visual areas of the brain, and the blending of these bilateral images to form a single image. These delicately adjusted mechanisms are related to vision, fixation, and fusion. Their development was measured by Chevasse[1] and was later confirmed by Gesell and his associates[2] (Table 1.)

The normal process of visual development may be interrupted at any age, for a variety of causes. The first result of the interruption is a decrease in vision in one eye or both. The next usual result is the development of strabismus.

It is frequently necessary to determine whether a true strabismus exists. Children who have wide epicanthi or who present epicanthosis manifest pseudostrabismus.

Because the cause of crossed eyes is most often some muscular dysfunction, it is likely to be forgotten that there may also be other causes. This is an error which may have serious consequences. It may cause loss of vision. It may initiate highly undesirable psychic disturbances. It may even cause loss of life. Early diagnosis and prompt treatment are imperative if consequences such as these are to be prevented.

Three potentially lethal conditions may be associated with crossed eyes. In each the squint may be the first evidence of disease. They are brain tumor, retrobulbar tumor, and retinoblastoma. The latter is a highly malignant tumor of childhood, in which the eye shows a tendency to cross even before the characteristic gray, catlike retina can be seen shining through the pupil.

There are a number of conditions in which crossing of the eyes is present at one stage or another of the pathologic process and in which loss of vision may be the end-result. Among these diseases are:

1. Retrolental fibroplasia, in which crossing of the eyes is a late manifestation.

2. Congenital cataract, in which squint is occasionally the first manifestation. This condition, which is often associated with

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*Presented at meeting of the Orleans Parish Medical Society, April 13, 1953.

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TABLE 1

STEPS IN DEVELOPMENT OF VISION*

	Visual Acuity	Fixation and Stability
Birth		Aimless movements
2 weeks		Momentary fixation.
6 weeks		Fixation held for few seconds.
5 months	20/2000	Exact fixation held.
6 months	20/1000	Normal field of fixation.
9 months	20/200	
2 years	20/45	Fusion reflex recognized; capable of complete extinction.
3 years	20/30	Fusion reflex established; deteriorates greatly from disuse.
4 years	20/25	Fusion reflex and visual acuity deteriorate from disuse; rapid recovery with re-use.
6 years	20/20	Fusion reflex and visual acuity more stable, may still deteriorate from disuse.
8 years		Fusion reflex and visual acuity unconditionally fixed.

*Modified from Lyle.[1]

nystagmus, may be monocular or binocular.

3. Congenital anomalies, of which strabismus fixus is an illustration.

4. Errors of refraction, in which loss of vision may result from nonuse of the affected eye. If fusion is normal, unequal refractive errors may not cause strabismus, because normal fusion can hold the eyes in alignment. If fusion is subnormal, or if it has not developed, crossing of the eyes may result.

5. Monocular blindness from any cause. If there is any latent muscle imbalance (phoria) present the blinded eye will usually turn, since fusion no longer operates to hold the eyes parallel.

The muscular dysfunctions which are the most common cause of crossed eyes are due to a variety of causes:

1. Congenital weakness of the muscles.

2. Hereditary strabismus, which may be inherited by the child even when it does not show in the parents. It may be present, instead, in the nondirect line of descent.

3. Loss of muscle tone from general disability. In such cases the squint tends to be periodic, disappearing when the child is in good health and emotionally stable and reappearing when he is ill, nervous or tired.

4. Childhood diseases. It is not uncommon to observe crossing of the eyes for the first time after measles, influenza, mumps or some other illness. In such instances the effect of the disease is merely to hasten the appearance of the squint. The latent weakness is already present and would have appeared sooner or later. This is not true of diphtheria, which affects the eye muscle directly.

5. Trauma (birth injury). This may occur during delivery and may become manifest or occur during the growth of the child. It may be the result of improperly applied forceps, but most often it is the outcome of spontaneous delivery. It has been estimated that in from a third to a half of all spontaneous deliveries the inevitable compression of the head during the process produces multiple tiny bleeding points within the brain. These minute hemorrhages, as a rule, are quickly absorbed. If for any reason they are not, it is conceivable that some cerebral disturbance may occur, which may result in permanent damage and crossed eyes.

In the search for the underlying factor responsible for the crossing of the eyes, it must never be forgotten that more than one cause may be present.

The serious psychic manifestations sometimes associated with crossed eyes may actually be more serious than the squint itself. The child knows that he is different from other children. At first he attempts to conceal his abnormality by special positions of the head. In the end, he may become a personality problem, with manifestations rang-

ing from lack of group participation to frank exhibitionism. We have one such patient under treatment at this time. Her squint first appeared at the age of 2 years, after she had measles. She is now 7. Conservative therapy was advised by a number of competent ophthalmologists and was carried out faithfully, but without success. In every instance, as soon as surgery was advised, the parents changed physicians. Now the child sees well, but she presents psychic problems and the parents are far more concerned about them than they are about her squint, for which they are now eager to accept surgery.

PRINCIPLES OF THERAPY

The therapy of crossed eyes must obviously begin with an identification of the causes, since they will determine the form which treatment must take. Therapy must be directed at the parents even before it is applied to the child. Parents must be made to understand that the problem is one of visual function, not merely one of appearance, as they so often incorrectly believe. They must be made to understand that unless the crossing of the eyes is of nervous origin, the chances of spontaneous cure are practically nonexistent. It must be explained to them that because the development of vision occurs early in life and is completed by the sixth to eighth year, there is no justification for the general belief that the correction of the squint may safely be deferred until the child is of school age, or even later.

Actually, if treatment is delayed and if obstacles to good vision are not corrected, irreversible anatomic changes may develop in the muscles. The overstimulated muscle on the deviating side becomes hypertrophic and fibrotic, as a result of constant contraction and spasm. The antagonist muscle becomes thinned and weakened, as a result of constant relaxation. If the anomaly is monocular, failure to correct it will result in early blindness from disuse, with abnormal retinal correspondence. If it is of the alternating type, the habit of alternating suppression may develop. In either event, the goal of fusion cannot be reached.

All crossed eyes do not require surgery, though nonsurgical measures are applicable only in selected cases. Furthermore, they must be carried out precisely, over long periods of time, if they are to succeed. If surgery is necessary, the particular procedure depends upon the etiologic factor or factors responsible for the anomaly. Whatever surgical or nonsurgical measures may be applied, the goal of therapy is to eliminate potentially fatal conditions, avoid psychic disturbances, and establish stable habits of binocular vision. The achievement of the goal of good binocular vision requires: (1) good vision in each eye, (2) good motility in each eye, and (3) proper alignment of the eyes during early childhood.

SUMMARY

A comprehension of the various etiologic factors responsible for crossed eyes requires an understanding of the essential steps in the development of binocular vision. Although the most frequent cause of the anomaly is some muscular dysfunction, it is a serious error to overlook the possibility that other causes may be responsible. Such an error may cause loss of vision, initiate highly undesirable psychic disturbances, and even lead to loss of life.

Possible etiologic factors in crossed eyes are discussed, and principles of therapy are outlined.

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DISCUSSION

Dr. George S. Ellis (New Orleans): Dr. Haik has pictured for us many of the causes of strabismus. In discussing his paper he has asked that I talk about the muscular aspects of strabismus and point out the relation of therapy to the development of vision.

The rational treatment of strabismus in children is based upon a combined knowledge of the development of normal binocular vision, how development of vision affects strabismus, and how strabismus affects vision.

Studies have shown that when a child is born he sees light but cannot follow it and does not have fixation. During the first few years of life he must learn to see just as he must learn to talk or to walk. Through learning and practice he develops

fixation, visual acuity, and fusion of the two images. The development of exact fixation is usually achieved between the third and fifth months. As the child grows older he is able to fixate more quickly and hold fixation for longer periods. While good fixation is essential for the development of visual acuity, the acuity also improves the quality of fixation. The most rapid development of vision is during the first two years. At the end of that time acuity is 20/45. The visual acuity reaches 20/20 between the fourth and sixth year. The development of fusion becomes recognized at two years of age and is stable by the sixth year.

During the first few years of life the development of vision is labile. Any obstruction to its further development will cause its deterioration, and the child will develop abnormal visual habits. At the end of the sixth year the development of visual habits is usually complete. The visual habits are permanent regardless of whether they are normal and binocular or abnormal and monocular. Surveys have shown that 1 to 1.5 per cent of the children in a general population group have strabismus.

If strabismus has its onset after the age of six and there is good vision in each eye, the patient will complain of diplopia and will seek relief. When strabismus occurs prior to the age of six the child does not see double, but he learns to suppress constantly with his weaker eye and the vision in that eye deteriorates. He develops abnormal habits of vision and these become permanent if neglected. The longer they are allowed to remain the more difficult they are to change. The extra-ocular muscles develop irreversible changes which alter their action and limit the motility of the eye.

The therapist must establish good vision in each eye, good motility in each eye, and proper alignment of the two eyes as early in childhood as possible. He must destroy abnormal visual habits and teach the child normal habits in an effort to restore normal development. This demands great cooperation between parents and physician. It is important that the parents be adequately informed of the program of treatment since successful treatment can be greatly aided by intelligent parental cooperation.

The program of treatment is comparable to that of straightening teeth—a long period of treatment with periodic adjustments. The child must be kept under observation during the period of visual development and until the age when the development of visual habits has become complete and permanent. There is no rapid cure for strabismus. If the child has a refractive error it should be corrected with glasses so that he will have the maximum opportunity to develop his vision. In teaching the child normal visual habits, it is often necessary for him to wear a patch over his better eye for a period of several months so that he will develop better visual acuity and motility in his weaker eye. It is often necessary to prescribe atropine in one eye to discourage the child's preference for using it. Orthoptic exercises may be prescribed to teach and develop a good quality of fusion so that the two eyes will become welded in their position of proper alignment. Surgery may be necessary to restore proper alignment and motility.

It is essential that the treatment of strabismus be begun before the potentials of normal binocular vision are lost. If treatment is deferred until after six years of age the results will probably be limited to cosmetic improvement. Although this falls short of the ideal, it is of course a considerable gain because of the social and economic problems caused by being cross-eyed.

DIAPHRAGMATIC HERNIA THROUGH THE FORAMEN OF BOCHDALEK IN A NEWBORN INFANT

F. MICHAEL SMITH, JR., M. D.
THIBODAUX

Congenital diaphragmatic hernia is a serious lesion, which menaces the life of the newborn infant. In the young embryo the thoracic and abdominal portions of the body cavity communicate freely with each other. The ventral part of the diaphragm is formed from the septum transversum which separates the heart from the abdominal viscera. This septum is joined posteriorly by a proliferation of mesodermal cells at the upper end of the dorsal mesentery to make a bridge across the celomic cavity from front to back, but openings are left in both posterolateral parts of the diaphragm which are known as the pleuroperitoneal canals. These canals are later closed by a double-layered membrane, consisting of peritoneum on one side and pleura on the other. Striated muscle then develops between these two serous coats to complete and strengthen the partition between the peritoneal and pleural cavities.

The formation of the diaphragm is sufficiently complicated so that there is little wonder that congenital defects are apt to appear. If arrest in development occurs after pleural and peritoneal membranes have closed the defect, but before the muscle has appeared, the child is born with a thin hernial sac which covers the upward protruding intestines.

The most common congenital diaphragmatic hernia occurs along the pleuroperitoneal canal (the foramen of Bochdalek). The following is a case report of a successful reduction and repair of a pleuroperitoneal diaphragmatic hernia in a newborn infant.

CASE REPORT

Baby C. O., male child, was born at Saint Joseph Hospital, Thibodaux, La. at 6:00 A. M. on March 2, 1953. The mother, age 26, was in good health. She was a gravida 3 para 2, and her maternal serology was negative. This was a normal spontaneous delivery. The infant breathed readily and required no special efforts toward resuscitation. His birth weight was 7 pounds 2 ounces.

The infant was taken to the newborn nursery and placed in a basinet. During routine procedure of cleaning and clothing the nurses noted that the child became cyanotic. He was placed in a Gordon Armstrong incubator and oxygen was administered, whereupon the color immediately improved and all signs of respiratory distress disappeared. At 12 hours of age he was removed for his first feeding. The feeding was never given for the child again became cyanotic. He was immediately returned to the incubator where oxygen was resumed.

At noon, on March 3, 1953, the attending physician asked for pediatric consultation and at this time the author first saw the patient. On physical examination one noted a well developed, well nourished, white male infant who was having obvious respiratory distress. The breath sounds over the left hemithorax were completely absent. No murmurs were heard. The abdomen was flat and did not present the usual tympanitic sound on percussion. The liver margin could be felt approximately 2 cms. below the right costal margin.

An x-ray of the chest was ordered, (see Fig. 1).

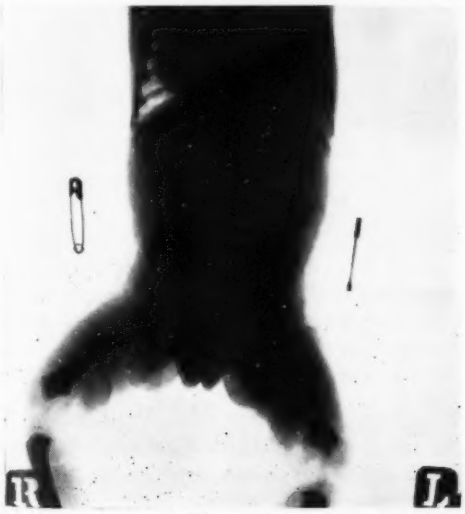

Figure 1

This film revealed a gas bubble in the stomach and a small gas bubble in the lower pelvic region. There was an opaque mass in the left infralateral portion of the left chest. The superior portion of the left lung field revealed multiple small rounded cystic structures. The heart and great vessels were displaced completely into the right chest region. The right lung was markedly compressed. From this film alone the diagnosis of diaphragmatic hernia with intrusion of abdominal contents into the left thoracic cavity was immediately suspected. One ounce of thin barium mixture was prepared and given by a nursing bottle. The infant was placed in deep Trendelenburg position and observed fluoroscopically. The mixture was seen to enter the stomach and sometime later proceed into the small bowel, where it gravitated into the left thoracic cavity. Spot films were made and one x-ray. (See Fig. 2). This film revealed barium filled

Figure 2

intestines in the left chest. The patient was returned to the nursery, placed back in the Gordon Armstrong incubator in reverse Trendelenburg position with his left side down. Blood was drawn for typing and matching and 400,000 units of penicillin were given intramuscularly. At 3:30 P. M. sodium luminal, grains 1½, and atropine, grains 1/1200, were given intramuscularly. At 4:30 P. M., the patient was taken to surgery, where reduction and repair of a diaphragmatic hernia in the left posteriolateral portion, through the foramen of Bochdalek was done. The entire gastrointestinal tract with exception of the upper two thirds of the stomach and the distal segment of the lower colon had entered the left chest cavity. Immediately, postoperatively the infant was taken to the radiology department for fluoroscopic examination. During this procedure the infant became cyanotic and respirations ceased. Air was aspirated from

the left chest by a 20 gauge needle and syringe. Oxygen was administered by a positive pressure closed system. Respirations were reestablished and the color improved. A continuous intravenous drip was set up in the scalp veins and 10 cc. per pound body weight of whole blood was given, followed by 200 cc. of normal saline and sufficient 5 per cent glucose in distilled water to give a total fluid intake of 75 cc. per pound of body weight for a twenty-four hour period. The patient was placed in the Gordon Armstrong incubator with the continuous drip running in the scalp veins, and Triton WR 1339 was administered through a standard aerosol technique. At 2:30 A. M. on March 4, 1953, the baby became cyanotic and respiration was labored. An emergency film of the chest was made which revealed a marked left pneumothorax. (Fig. 3). A 20 gauge needle was again inserted into

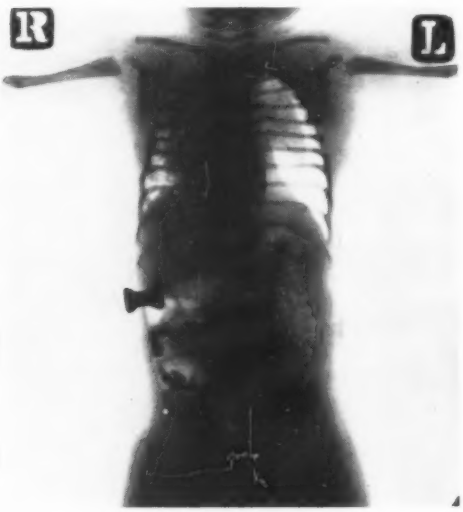

Figure 3

the left pneumothorax and secured in place by means of a hemostat. The plastic tubing from a disposal Baxter intravenous drip set was attached to the needle on one end and to a water trap on the other. By this means the tension pneumothorax was reduced. Approximately twelve hours later at 2:00 P. M. on March 4, 1953, repeat films were made with lateral and AP views which showed the lung on the left to be almost completely re-expanded. A Levin tube had been inserted through the esophagus for the purpose of gastric suction to relieve abdominal distention. (Fig. 4). The needle was withdrawn from the chest at this time. The patient returned to the Gordon Armstrong incubator where Triton WR 1339 was administered until 6:00 A. M. of March 5, 1953. At this time 5 per cent glucose in distilled water in amounts of 15 cc. was begun orally. The patient had several meconium stools, which now began to show traces of barium when

Figure 4.—Lateral

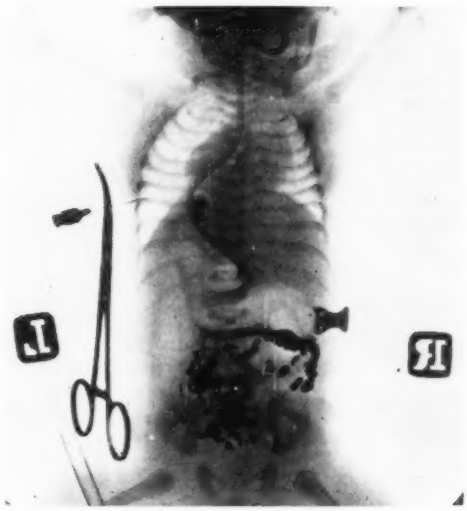

Figure 4.—Anteroposterior

the diaper with the stool was viewed under the fluoroscope. On auscultation of the abdomen, normal bowel sounds could be heard. At 4:00 P. M. a repeat film revealed lungs almost completely expanded and normal cardiac position. (Fig. 5). At 12:00 noon, March 5, 1953, a milk formula of evaporated milk 1 oz., boiled water 2 oz., white Karo 1 teaspoon, was begun in the amounts of 30 cc. every three hours. A second injection of 400,000 units of penicillin was administered intramuscularly. The infant began to nurse well and had a completely uneventful postoperative course, from then until discharged from the hospital on March 14, 1953.

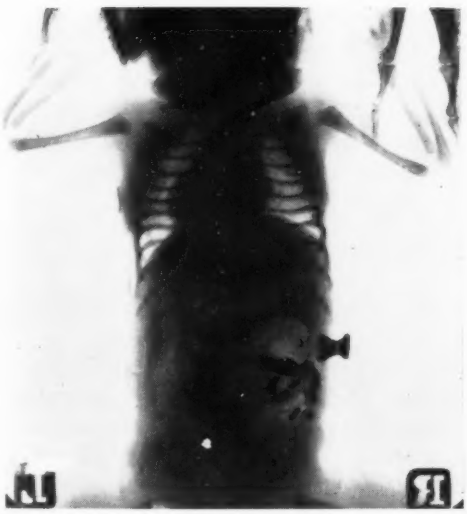

Figure 5

COMMENTS

When a sufficient intrusion of abdominal contents into the thoracic cavity has taken place, cyanosis will often become so severe that, as in this case, it is the predominant symptom. The classical symptoms of diaphragmatic hernia in a newborn infant are cyanosis, dyspnea, and vomiting. Vomiting may be only occasional or may be associated with almost all food ingested. The amount of dyspnea is directly proportional to the amount of reduced vital capacity. On physical examination, both the respiratory rates and the pulse rates are increased. By inspection, the affected side of the chest will move less than the normal side. On percussion of the chest the side of the hernia may be either dull or tympanitic, depending upon whether the viscera which have intruded into the pleural cavity contain fluid or air. On auscultation, the breath sounds are either distant or absent.

X-ray studies are of the greatest importance. Many authors feel that barium studies should be omitted if possible. However, if there is any doubt as to the true nature of the pathology involved, a few swallows of thin barium will usually visualize this defect, so as to erase all doubt.

Obviously, the treatment of choice is immediate surgery. There is nothing to be gained in waiting or observation. Many authors feel this has been responsible for the loss of a great many children who might otherwise have been saved. An infant in the first forty-eight hours is in a better position from a standpoint of fluid balance to withstand the shock of surgery than at the end of a week, during which time physiological weight loss, icterus, and reduction in hemoglobin take place. In this case herein presented we were definitely impressed with the use of Triton WR 1339 as a means of combating the postoperative atelectasis. During the procedure the operator inserted a catheter through the defect in the diaphragm to the pleural cavity for the purpose of injecting air to facilitate the return of the abdominal viscera. This positive pressure remained in the left thoracic cavity after the defect was closed. The use of the needle and water trap was a life saving procedure in reducing the postoperative tension pneumothorax in this case.

If these lesions can be diagnosed early and adequate surgical correction done, the result should be good. In the immediate postoperative period, blood should be given to combat surgical shock, but careful attention to the rate of fluid administration is mandatory so that no undue strain will be placed on the right side of the heart. The room air which has been trapped in the pleural cavity by the closure of the diaphragm, was best removed in this case by the use of the water trap. The continuous administration of oxygen therapy and Triton WR-1339 mist helps in the re-expansion of the compressed pulmonary tissue. Oxygen also aids in deflation of intestines. The use of a small Levin tube will combat gastric distention. In twelve to twenty-four hours postoperatively fluid may be started per os with caution.

SUMMARY

A case of congenital diaphragmatic hernia through the foramen of Bochdalek has been presented. The embryology and classical clinical findings have been reviewed. The apparent beneficial results from the use of Triton WR-1339 mist therapy were discussed, along with other measures necessary to adequate postoperative care. The

importance of early diagnosis and surgery was stressed.

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AS A LAYMAN SEES IT!*

JAMES Y. BOWEN

NEW ORLEANS

It seems that almost since I can remember, my work has brought me in close contact with the medical profession and in recent years as a hospital administrator this association has been a direct one. Contrary to the old adage that "familiarity breeds contempt," I find my attitude toward the profession to be one of continuing, and growing admiration and respect.

Naturally, I have been very much interested in developments in recent years with regard to socialized medicine, compulsory health insurance, and the like.

I believe that in this struggle the medical profession has been much maligned. That the medical profession has, so far, been successful in this fight speaks well both for the profession itself and for the good sense of the general public as well. However, it is most distressing that a profession embodying such high ideals and standards, and engaged in a purely humanitarian work should ever find itself having to wage such a battle.

Why? This is the question I want to discuss briefly.

I am sure that the profession itself would be the first to admit that there are many problems yet to be solved and, as in other fields, there is room for improvement. However, I do not believe that these shortcomings, whatever they may be, are primarily responsible for the predicament in which the profession found itself in this fight—that of being on the defensive.

Certainly, the record of the profession is one of outstanding progress and growth over the years and there is no question that there is better medical care available today for more people than ever before. Why is it then that this movement toward government medicine should get such strong support?

I believe it is a matter of public relations primarily. Now, I realize that all these things have probably been said before and that this idea is not new. Fortunately, there seems to have been a general awakening to the problem in the medical, hospital, and allied fields. I think the outstanding example pointing up the need lies in the extremely poor press accompanying the action of the AMA a few years ago in employing a public relations firm as counsel and in making the extra assessment for this purpose. Certainly, this public relations firm did an outstanding job—its immediate purpose was accomplished—but I wonder if it was not really a job of expediency and not necessarily intended as the long run approach to the broader problem.

At this point I want to say that I am by no means posing as a public relations expert. My position is merely that of an interested layman and it is my hope that the viewpoint of a layman may be of some interest to this group. I have not conducted any survey of any kind but I have been very much interested in some of the "griping" I have heard, and particularly in the attitudes one finds.

Of course, the financial angle always gets its share of comment and discussion. According to some people the doctors are all making too much money—getting rich; hospitals are all gouging the public; and the average person just cannot afford to be sick for more than a day or two. (I wonder if he ever could).

Most certainly, this financing of medical care can be, and oftentimes is, an acute problem, particularly in certain individual cases. However, when we look at the figures on cost trends in recent years, we find

*Presented at meeting of the Rapides Parish Medical Society, June 2, 1952.

that medical costs (fees, that is) have not risen as much as the average increase in the cost of living index. Too, it is interesting to note that in 1950 the amount expended for physicians and hospital care was only a little better than 3 per cent of the national income. I believe this percentage will compare favorably with the same information of fifty years ago. It might also be of interest to compare the amount spent for medical care with the amount spent for whisky and cigarettes. Certainly, there are many people constantly spending a great deal of money—probably a lot more than they spend for medical care—on things that not only are not necessary but often are not even worthwhile.

So much for the general picture. Let's take a look at the charge that doctors are making too much money. In a free country such as ours this charge raises a lot of questions, but the thing of interest here is the implication that the doctors charge too much for their services—fees are too high.

Now, I am sure that there does exist the matter of the exorbitant fee, but I am equally sure that this is the exception rather than the rule. That it exists at all though is of grave concern to the medical profession because such practice does damage the profession generally.

The principle that "the laborer is worthy of his hire" is long and well established and applies to the physician the same as to anyone else. Assuming that his fee is reasonable and his service good, is there any reason why the physician should not expect his patient to pay just as willingly—yes, even gladly—but certainly as willingly, as he pays for anything else. While there may be a lot of people who do begrudge the money they spend for the doctor's services, I do not believe the majority feel that way at all. However, I do wonder if even among the majority this is not often a sort of negative feeling about the expense. In some ways this is not hard to understand because everyone naturally looks on an illness —mild or serious—as a misfortune, and I suppose some of this feeling attaches itself to the doctor's bill. Although, certainly, an ill person is mighty glad to see the doctor at the time.

In spite of this handicap, I wonder if there is not some way to promote a positive feeling about paying the doctor. When the patient received his bill would it not be wonderful if it brought to mind the feeling of "How good it is to have a doctor available when I need him"; rather than "Man, it sure is terrible to be sick, I'll never get through paying for it." Maybe that is asking too much of human nature, but when we think of the possible consequences of many even minor illnesses or injuries, we wonder that people don't always feel positively good about the doctor's bill.

People are paying for services, buying things—radios, TV sets, automobiles, telephones—all sorts of things that more often than not are luxuries—and bragging about it. Can any of these things compare with what the physician offers his patient? Certainly not, and there is surely some way to get the patient really to appreciate what he is paying for when he pays his doctor's bill.

We hear a great deal these days, too, about the cost of being hospitalized; and certainly, no one can deny that hospital costs, both dollarwise and percentagewise, have increased considerably.

Although the individual bedside attention may not be quite what it once was, hospital equipment and facilities have been vastly improved. This equipment and these new facilities are terrifically expensive and often require additional trained technical personnel.

Also inflation has made itself felt not only in increased costs but in the shrinking value of endowment funds as well. Because of this and the fact that big donors and benefactors are becoming more and more scarce, many hospitals are faced with the problem of providing funds for replacement of obsolete equipment, etc., when in the past they were able to do this through income from endowments or could call on some wealthy friend of the hospital for a special donation. Salaries of personnel have had to be increased and, even so, I am not sure they have kept pace with other fields. And there

are many other changes and increases. All of these things cost money, and they add up to a lot of money, too. For most hospitals there is only one place to get it—the patient.

But, as was pointed out, costs have risen in practically every field. So, I doubt if increased costs alone can account for the complaints we get about hospital bills. Could it be that there is a lack of understanding and appreciation of the hospitals also? I daresay some of you here tonight have wondered why hospitals have to charge so much. However, I believe investigation will show hospital charges generally to be reasonable and in line with costs.

The hospital and the physician are interdependent, to a greater degree today than ever before; and hospital costs being an integral part of this whole problem, it seems to me important that the physician should have some understanding of the problems of the hospital in which he practices, and vice versa. Thus, the doctor would be in a much better position to discuss hospital charges with his patients and possibly aid in preventing misunderstandings and complaints. The hospital has just as difficult a time getting its story across as does the doctor. And a patient dissatisfied with his hospital bill might be more readily inclined to be disgruntled about something else.

In considering this matter of the cost of medical care, I cannot help wondering if both the doctors and the hospitals have not been on the defensive and guilty of negative thinking. If the doctors and the hospitals give value received—and I believe they do—then, there is surely some way to get the story across.

There are, of course, questions other than financial ones that come up, such as: complaints about having to wait so long in the doctor's office; difficulty in getting a doctor nights and week-ends; difficulty in getting a doctor to make house calls; and so on. How much justification there is in these complaints generally I am not prepared to say. But, from the patient's, and the public's point of view they are very important, and are therefore of concern to the doctors. Is there not something that can be done to eliminate such complaints, or at least cut them to a minimum?

Not long ago, in a meeting, when told that the medical society had given its support to something, a public relations man made this remark; "What? I never heard of them being *for* anything—always *against* something." I have never heard anyone else make such a statement but it is bad if even one person has that impression. And, if he had it, it is at least possible there are others with the same feeling. Certainly, it might be possible to believe, from some of the publicity we see, that the medical society is solely a self protection organization. I am sure this is not true and I wonder if there is not some way the medical society can make its good works known. Of course, the individual doctor cannot advertise (and this is certainly as it should be) but surely the Society can give some publicity to its activities.

This brings me to another comment which I have heard on more than one occasion—that doctors are poor contributors. This is with reference to financial contributions to the various social agencies and charitable organizations. Now, I have made no study of this and do not know just what the facts are. But I am sure the doctor usually feels that he gives sufficiently of his time to direct charity in his work that he does not expect to have his contribution of money compared with those who render no such service.

Also, we hear the complaint that the doctor does not give his time to civic activities as generously as he should—that he isolates himself in the community in this respect. If this is true, it may be worth some serious consideration. Certainly, the doctor usually has his hands pretty full and there is no question that his time for such activities is limited. Extremely so when compared to the man who considers it an integral part of his business to participate in as many of these activities as possible. However, what is good public relations for one field might also be in another. I wonder if the medical

society itself might not be able to assist in dispelling such impressions.

Is there anyone in Alexandria who knows how much time the doctors of this parish—collectively—devote to charity each month? How many patients are seen without charge? Does anyone know how many doctors devote some of their time to civic affairs? And how much time they give? Does anyone know how much time is given by doctors to hospital staff meetings? Clinical conferences? Scientific and other meetings that add to their knowledge as physicans or promote the general health of the community?

I believe this kind of information would be of general interest to the community. It might even be of interest to the profession itself. I cannot help feeling that if the people had the facts they would realize—if they do not already—that the Medical Society and the doctors are very vital and integral parts of the whole community.

In considering these complaints and problems, I think it is obvious that, by and large, they are the result of misunderstanding, and thus problems of what is usually called public relations.

It is an accepted fact in the business world that selling a service, or an intangible is often the most difficult selling there is. I do not mean at all to compare the practice of medicine with the ordinary business enterprise, but the things we have been talking about here are intangible.

However, it seems to me that the medical profession enjoys a most enviable position in this respect. How many times have we heard statements to the effect that "Good health is to be desired above almost everything else," and that "If I can just keep my good health (or get it back), I won't worry about anything."? Consider this thinking along with the fact that the physician renders a service of the utmost importance in our daily lives—physically, mentally, economically, a service that, by its very nature, is dramatic. Could there possibly be any better or sounder basis for a program of good public relations?

In this discussion I have not intended to leave the impression that I think the medical profession is in a bad way. On the contrary, I believe it enjoys the highest confidence and respect generally, and this is well deserved. I do feel though that it has not always enjoyed the best possible public relations—that this has been somewhat neglected. And if there is anything I have said here tonight that will serve to assist in this problem, I shall feel justified in taking your time.

The Journal of the Louisiana State Medical Society

Established 1844

Published by the Louisiana State Medical Society under the jurisdiction of the following named Journal Committee:

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SUBSCRIPTION TERMS: $4.00 per year in advance, postage paid, for the United States; $4.50 per year for all foreign countries belonging to the Postal Union.

News material for publication should be received not later than the eighteenth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

Manuscripts should be addressed to the Editor, 1430 Tulane Ave., New Orleans, La.

THE JOURNAL *does not hold itself responsible for statements made by any contributor.*

OFFICERS OF THE LOUISIANA STATE MEDICAL SOCIETY FOR THE YEAR

At the Seventy-third Annual Meeting of the Louisiana State Medical Society, at New Orleans, May 7-9, 1953, officers were selected for the coming year. The House of Delegates exercised its usual care and wisdom in the choice, and the members are to be congratulated on its selection of physicians for these posts of honor and responsibility.

The President, Dr. Philip H. Jones, has served the Society in various other capacities. He is probably sufficiently well known to the readers of these columns in recent years.

The President Elect is Dr. Walter Moss of Lake Charles. Dr. Moss has been an effective leader in his Parish and District Society. He served as House Surgeon at Charity Hospital, and rendered valuable assistance as a public citizen in the work of the State Hospital Board. He will bring to the presidency mature judgment and professional good will which will be most valuable. His appearance on the Executive Committee at a time when the affairs of Medicine continue to be in a state of flux will add a most stabilizing influence.

The First Vice President is Dr. C. J. Brown of New Orleans. Dr. Brown has long been active in the affairs of the Orleans Parish Medical Society, has served as its President, and in recent years has been Chairman of the important State committee on Public Policy and Legislation.

The Second Vice President is Dr. Kernan Irwin of Baton Rouge. Dr. Irwin has long been active in the affairs of the East Baton Rouge Parish Medical Society. The Executive Committee will be most fortunate in having a member with his poise, judgment, and professional ability.

The Third Vice President is Dr. Milton Maxwell Hattaway, a well known surgeon of New Orleans. He has devoted his efforts for the Orleans Parish Medical Society in various capacities and directed the Committee on Public Relations and Medical Service with very great benefit to the Society for a period of years. His addition to the Executive Committee will be a source of help.

As the Chairman of the House of Delegates, there is a change. Dr. A. V. Friedrichs declined nomination. The members of the Society and the members of the House of Delegates owe him an outstanding debt of gratitude for his many services in various capacities in the field of organized medicine, and particularly, for his valued counsel on the Executive Committee and his masterful direction of the House of Delegates for many years. The profession appreciates his long services. Elected to be

Chairman was Dr. Robyn Hardy. Dr. Hardy is a busy surgeon of New Orleans. He served with distinction in the armed forces and has been active in the affairs of the Orleans Parish Medical Society, and has acted as Chairman of the Committee on Public Relations and Medical Service of the State Society. His efforts have been most effective and his actions for the organization most beneficial. We are fortunate in having in this most important position an officer of vision and decision.

The Vice Chairman of the House of Delegates is Dr. Ralph H. Riggs of Shreveport. Dr. Riggs is an eminent specialist in the field of Ear, Nose, and Throat, and has long been active in the interests of organized medicine in the Caddo Parish Medical Society of which he is President. He will be of great assistance in the deliberations of the Executive Committee, where his mature counsel will be an asset.

Dr. C. Grenes Cole continues his term as Secretary and Treasurer. His sagacious counsel, ripe experience, and broad contact with both professional and legislative aspects of medicine add even greater worth to his qualifications for this position. The whole operation of the Society's affairs and the conduct of the annual meeting are a tribute to his mature judgment and capacity as a leader. The members of the profession are most fortunate in having him continue in so vital a position.

The Council in the coming year remains the same. As the complexities of medicine and the responsibility of the Society increase, the duties of the Council become more arduous. The membership and the public look to it as a mediatory and judiciary body which functions most admirably as a clearing house for complaints and conflicts. The Council is to be commended for its efforts along these lines in recent years. The membership should feel it as their own responsibility and their privilege to cooperate with the Council in the adjustment of differences within the profession and with the laity.

The officers and Executive Committee of the Society face a difficult year. There are many matters in which the public relations of organized medicine need to be improved. It is anticipated that the vicious bill to license the chiropractic in this State will again be presented to the legislature. The campaign to this end has already been initiated by the adherents of this cult. Louisiana is one of the few states which still holds out against allowing such quackery to be licensed. The profession in Louisiana is embattled with a nationwide organization of those who speak of themselves as chiropractors. These chiropractors are waging a campaign to have themselves admitted as practitioners in the armed services and in the Veterans Adminstration. It is of vital interest to the profession to prevent the passage of any chiropractic-licensing bill in Louisiana.

In the discharge of these arduous duties, the officers look to the hearty cooperation and active assistance of the membership of the Louisiana State Medical Society.

—o—

ORGANIZATION SECTION

The Executive Committee dedicates this section to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.

REPORT OF COMMITTEE ON RESOLUTIONS

House of Delegates
1953 Annual Meeting
New Orleans, Louisiana
Gentlemen:

WHEREAS, great courtesy has been extended to the Louisiana State Medical Society and its Auxiliary, assembled in convention at the Roosevelt Hotel in New Orleans, May 7-9,

THEREFORE, BE IT RESOLVED that the Louisiana State Medical Society expresses its sincere gratitude to the following individuals for making this meeting a complete success.

Dr. C. J. Brown and personnel of all Committees on Arrangements.

All members of the Orleans Parish Medical Society, hosts to the meeting.

Rev. Father Edward F. Murphy for the Annual Oration delivered at the Opening Meeting.

Hon. Thomas M. Brahney for words of welcome on behalf of the City of New Orleans.

Dr. George F. Lull, Secretary-Manager of the American Medical Association, and Mr. Thomas A. Hendricks, Secretary of the Council on Medical Service of the AMA, for addresses delivered and exhibit displayed.

Dr. Sam Hobson and Dr. A. V. Friedrichs, for expressions of welcome on behalf of the Orleans Parish Medical Society and the New Orleans Graduate Medical Assembly.

Following-out-of-state guests who participated in the Scientific Program: Dr. Willis E. Brown, Little Rock, Arkansas; Dr. Frank A. Donaldson, Jackson, Mississippi; Dr. Alexander Keller Doss, Fort Worth, Texas; Dr. Joseph Felsen, New York, New York; Dr. D. O. Ferris, Rochester, Minnesota; Dr. Robert P. Glover, Philadelphia, Pennsylvania; Dr. Ebbe Curtis Hoff, Richmond, Virginia; Dr. Charles Hooks, Galveston, Texas; Dr. Christopher Parnall, Jr., Rochester, New York; Dr. Meyer A. Perlstein, Chicago, Illinois; Dr. Edwin L. Prien, Boston, Massachusetts; Dr. Edwin L. Rippy, Dallas, Texas; Dr. David T. Smith, Durham, North Carolina; Dr. S. Ralph Terhune, Birmingham, Alabama; and Dr. Willard L. Waldron, Jackson, Mississippi.

Members of the Society who participated in the Scientific Program.

Radio and television stations for time given for programs incident to the meeting.

D. H. Holmes Company for cooperation in television broadcast on Sunday previous to the meeting.

The Times-Picayune, New Orleans States and New Orleans Item and newspapers throughout the state for news releases.

Scientific exhibitors.

Technical exhibitors.

Advertisers in the program.

Tulane University School of Medicine for use of auditorium by one of the scientific sections.

The Roosevelt Hotel, headquarters for the meeting, for excellent cooperation in handling hotel accommodations for members and guests and furnishing all requirements for scientific, business and social phases of the meeting.

Dr. Roy B. Harrison, Secretary, Louisiana State Board of Medical Examiners, for his comprehensive report submitted to the House of Delegates.

Dr. William E. Barker, Jr., President of the Society; Dr. Philip H. Jones, President-elect; and Dr. Edwin L. Zander, Past President, who rendered assistance in preparing details for the meeting.

Dr. C. Grenes Cole, Secretary-Treasurer.

Miss Annie Mae Shoemaker, Assistant Secretary-Treasurer, and the entire secretarial staff for assistance prior to and during the meeting.

Mrs. Thomas E. Strain, President of the Auxiliary; Mrs. C. Grenes Cole and Mrs. Roy B. Harrison, Chairmen of Arrangements for the Auxiliary Meeting.

Miss Betty Finnan of New Orleans for her beautiful decorations of rooms.

Expressions of gratitude are also extended to Governor Robert F. Kennon for his cooperation in medical matters of interest to the members of the State Society during the past year.

RECOMMENDATION

1. It is recommended that a copy of these resolutions be sent to each person and organization mentioned and also published in The Journal of the Louisiana State Medical Society,

Respectfully submitted,

/s/ J. E. Clayton, M. D.

/s/ R. E. Gillaspie, M. D.

/s/ M. C. Wiginton, M. D.

Chairman

REPORT OF COMMITTEE ON MEDICAL DEFENSE

At the time of the last report of this Committee there were five cases of malpractice suits referred to the attorney of the State Society which were still pending. Since the 1952 Annual Meeting the doctor involved in one of these cases has agreed, with the consent of the Committee on Medical Defense, to settle the case for $5,000.00. Judgment has been brought against the doctor for this amount; however, the attorney has filed exceptions in the case and payment has not yet been made. The other four cases mentioned above are still pending and there was no specific action taken in regard to these cases during the past year.

Since June, 1952 eight new cases have been brought to the attention of the Committee and referred to the attorney for the Society. Six suits were filed; two in Baton Rouge, one in Ringgold, one in New Orleans, one in Shreveport and one in Monroe. The doctors involved in three of these cases have agreed to a compromise and three of the cases are pending, with no specific action or recommendations. One case was settled for $500.00, compromise of $1,500.00 in one is being considered and compromise of $3,000.00 in another is being considered. It is interesting to note that in the case which probably will be settled for $1,500.00 the suit first called for $13,000.00. There have been only threatened suits in the other two instances, one of which occurred in Alexandria and one in Ruston.

Your Committee wishes to state that compromise in the above mentioned instances was agreed to only on recommendation of our attorney for specific legal reasons and not as a matter of routine policy.

On December 31, 1952 there was a balance of $2,199.60 in the savings account of the Medical Defense Fund and it is most probable that further investment in USA Savings Bonds will therefore be made during this year.

C. B. Erickson, M. D., Chairman

NATIONAL FUND FOR MEDICAL EDUCATION

79 Schools Key to Nation's Health . . . .

They train approximately 27,000 undergraduates and 55,000 other medical scientists taking post-graduate work. They graduate 6,000 doctors annually, 1,000 more than a decade ago, but not enough to keep pace with the ever-increasing demand. Strong, self-reliant, well-staffed medical schools are a keystone of national welfare. The nation's health depends upon the physicians, research scientists, public health specialists they train. We simply cannot afford to allow their academic standards to deteriorate. The consequences in terms of national health and welfare would be tragic.

1951 Deficits Totalled $9,500,000 . . . .

Today at least $5,000,000 is needed to meet urgent medical school needs; another $5,000,000 to overcome equally pressing long range problems. Lack of funds is endangering the nation's medical standards. The schools cannot properly maintain their teaching programs. Medical school deficits cause heavy drains upon university budgets, adversely affecting other fields of higher education.

The average cost of training a doctor has doubled in 20 years to $10,000. Tuition fees, raised 165% since 1940, pay only one-fifth of this cost.

Gifts, income from endowments, general university funds and public appropriations no longer provide sufficient revenue to meet current operating costs, let alone future demands.

If Private Support is Not Forthcoming—

Without adequate support, medical training will deteriorate quickly.

The medical schools, during the 20th century, have given this nation the world's finest health standards. To allow them to falter because of financial distress, would be national short-sightedness in the extreme.

79 Schools Key to Nation's Health . . . .

Help is needed from corporations. In order to permit such corporations to make donations for this purpose congress passed legislation permitting corporations to deduct for federal income tax purposes contributions to charitable organizations up to 5% of their net income. 29 states have passed such laws. Louisiana is one of the states which has not. The legislation committee should consider such a bill at the next session of the legislature.

The local schools have profited to this extent. Louisiana State University with 438 students and 98 graduates received $37,463 and Tulane University with 511 students and 132 graduates, $38,906. Louisiana contributions to the fund, Jan. 1 to Dec. 31, 1952 was 12 contributions and total amount of $699.00. Compare this with New York: 985 contributions for a total of $53,023.47 and Nebraska 464 contributions for a total of $49,121.25.

This more than ever makes it necessary for the schools and medical profession to get together and through their own efforts, the cooperation of business and through the parish societies as well as auxiliaries to further this program in Louisiana.

E. L. Zander, M. D.

———o———

NURSING HOMES

For the past few years it has been apparent that there was a great and crying need for some supervision and inspection of the many nursing homes, in both our rural and urban communities and more especially in our larger cities where many of the homes are located. As time goes on there will be a greater need for the services and accommodations offered to these individuals who go to make up these types of patients.

We must realize that the great increase in demand for services in these facilities has been brought about largely by the soaring age limit of life's expectancy, thereby expanding the span of life from thirty-two (32) years in early 1900 to sixty-nine (69) years in 1953.

This fact, is to a great extent, more or less responsible for the large number of individuals who are victims of old age and illness and who are suffering with chronic diseases at the present time, and are in need of such nursing homes.

Act No. 406 passed by the 1952 Legislature placed the responsibility of inspection and licensing of these homes in the hands of the State Department of Health, and Section No. 14 of this act requires that the State Health Officer appoint an Advisory Nursing Home Council composed of representatives of the Louisiana State Medical Society, Louisiana State Hospital Association, Louisiana State Registered Nurses Association, Louisiana State Practical Nurses Association, The State Fire Marshal, Louisiana Municipal League, Louisiana Police Jury Association, Louisiana State Department of Welfare, and the State Department of Institutions, to consult with the Board of Health in the development of rules and regulations, and in matters of policy affecting administration of the act.

These homes are thoroughly inspected and those institutions which satisfactorily meet all the requirements of this act are permitted to operate, thereby assuring these unfortunate patients of good accommodations and treatment, and those homes who do not promise and furnish this service will not be allowed to operate in our state.

We believe this is a splendid accomplishment and a move in the right direction and will result in great benefits to our people.

LOUISIANA STATE MEDICAL SOCIETY NEWS

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
East Baton Rouge	Second Tuesday of every month	Baton Rouge
Morehouse	Third Thursday of every month	Bastrop
Natchitoches	Second Tuesday of every month	
Orleans	Second Monday of every month	New Orleans
Ouachita	First Thursday of every month	Monroe
Rapides	First Monday of every month	Alexandria
Sabine	First Wednesday of every month	
Second District	Third Thursday of every month	
Shreveport	First Tuesday of every month	Shreveport
Vernon	First Thursday of every month	

DR. LEON J. MENVILLE

Dr. Leon J. Menville of New Orleans, Emeritus Professor of Radiology, Tulane Medical School, has recently been honored by The Radiological Society of North America.

In addition to being made an Honorary Member of this society, he will receive a diploma from the society with the following citation:

"Dr. Leon J. Menville of New Orleans, Louisiana, is a past president of The Radiological Society of North America and former editor of Radiology. His service to radiology as a teacher and a leader in medicine has been of such high order that your Board felt in conferring Honorary Membership on Dr. Menville, we were not only honoring him but we were sincerely testifying to the achievements of a great physician."

During the thirty-eight years of its existence, The Radiological Society of North America has conferred this honor on only eight persons, all of whom have attained national distinction. Among those honored were: Wm. D. Coolidge, Ph.D., the inventor of the Coolidge X-ray tube; Wm. Duane, Ph.D., Professor of Physics, Harvard University; James F. Ewing, M.D. Professor of Pathology, Cornell University; George E. Phalen, M.D., Professor of Radiology, University of Pennsylvania Graduate School; Alex Reyn, M.D., Copenhagen, Denmark.

A.M.A. INAUGURAL CEREMONY WILL BE BROADCAST BY ABC

The American Broadcasting Company radio network will carry the inauguration of Dr. Edward J. McCormick of Toledo, Ohio, as President of the American Medical Association on Wednesday night, June 3, it has been announced by A.M.A. headquarters in Chicago.

The inaugural ceremony at the 102nd Annual Session of the A.M.A. in New York City will be heard over more than 300 ABC stations in this country, Alaska and Hawaii. Except for some local variations because of station program schedules, the inauguration will be carried at 10-10:30 P.M. in the Eastern Time Zone and 9-9:30 P.M. in all other time zones.

The actual inaugural ceremony will take place Tuesday night, June 2, in the Hotel Commodore, but it is expected that practically all radio and television time that night will be disrupted by special news and film programs on the coronation of Queen Elizabeth. It therefore will be necessary to transcribe the program for a delayed broadcast on Wednesday night.

TOXEMIA AND PREGNANCY

Early and continuous prenatal care would effectively prevent the occurrence of many cases of toxemias, one of the most serious complications of pregnancy, according to Dr. Howard J. Tatum of the Louisiana State University School of Medicine.

A member of the obstetrics and gynecology faculty, Dr. Tatum added that "plenty of lean meat and limitation of salt are the most important preventive measures as yet known. The physician cannot regulate the diet if the prospective mother does not seek medical attention."

Toxemias are now the most important single cause of death associated with pregnancy in Louisiana and in the South as a whole according to Dr. Tatum.

He said, "In this state during 1951, 30 per cent of the women who died during pregnancy died as a result of toxemia. Toxemia very frequently causes premature births and hence many babies are lost as an indirect result of the disease of the mother. There is good evidence that repeated severe toxemias in the same mother may significantly shorten the mother's life expectancy."

DENSE GALLBLADDER SHADOWS MADE POSSIBLE WITH TELEPAQUE

Telepaque has proven the most satisfactory of the contrast mediums currently used in cholecystography, and has made this procedure a simple, convenient and accurate test of gallbladder function, according to Drs. Wendell G. Scott and Wayne A. Simril of St. Louis, Mo. They report in the *American Journal of Roentgenology* (69:78, Jan. 1953).

Conclusions relating to Telepaque's effectiveness were based on use of the medium in 300 unselected cases since March 1951. The investigators found

that the radiopaque compound, which was introduced nationally by Winthrop-Stearns Inc. in 1952, produced gallbladder shadows of greater density than had been possible with other dyes. They attribute this to the fact that Telepaque contains 15 per cent more iodine than previously available mediums.

WHO CAN PREVENT TRAFFIC ACCIDENTS?

Only *you* can prevent traffic accidents.

If this strikes you as an unreasonable charge, you need to read a booklet we just received from The Travelers Insurance Companies. It is their annual publication of traffic accident data in which statisticians have dissected the anatomy of street and highway safety.

You would learn that 37,600 persons were killed and 2,090,000 injured by motor vehicle accidents last year. Turing the booklet's pages, you would find out why 1952 made tragic history as the most disastrous year for traffic casualties we have ever experienced.

It is clear from this report that most of last year's accidents could have been avoided. Most of them were caused by drivers and pedestrians in control of the circumstances which got them into trouble. The conclusion is inescapable: the accident problem can be solved only by those who do the driving and walking.

Only *you* can prevent traffic accidents.

SUPPLEMENT TO A.M.A. FILM CATALOG NOW AVAILABLE

The A.M.A. Committee on Medical Motion Pictures has announced the publication of a supplement to the list of films available through the motion picture library. This supplement includes 12 motion pictures added to the library since publication of he December 1, 1952 catalog. Copies may be obtained by writing to the committee on Medical Motion Pictures, American Medical Association, 535 North Dearborn, Chicago 10, Illinois.

SUPPLEMENT TO THE LIST OF FILMS CLEARED FOR TELEVISION USE NOW AVAILABLE

The Committee on Medical Motion Pictures of the American Medical Association has announced the publication of a supplement to the list of health education motion pictures cleared for use on television. This supplement lists 38 motion pictures which have been cleared for television use since publication of the original list in 1951.

Copies may be obtained by writing to the Committee on Medical Motion Pictures, American Medical Association, 535 North Dearborn Street, Chicago 10.

WOMAN'S AUXILIARY TO THE LOUISIANA STATE MEDICAL SOCIETY

THIRTIETH ANNUAL MEETING NEW YORK, N. Y., JUNE 1-5, 1953

A cordial invitation is extended to all members of the Woman's Auxiliary to the American Medical Association, their guests, and the guests of physicias attending the convention of the American Medical Association, to participate in all social functions and attend the general meetings of the Auxiliary.

Headquarters will be at the Hotel Statler. Tickets will be available at the registration desk only. Please register early and obtain your badge and program.

Registration Hours

Sunday	12:00 M to 4:00 P.M
Monday	9:00 A.M. to 4:00 P.M.
Tuesday	9:00 A.M. to 4:00 P.M.
Wednesday	9:00 A.M. to 4:00 P.M.
Thursday	9:00 A.M. to 12:00 M

Mrs. Adolph H. Emerson, Co-Chairman
Mrs. William J. Lavelle, Chairman
Committee on Arrangements

RAPIDES PARISH

Mrs. Samuel Levy of Natchitoches was principal speaker at the recent meeting of the Woman's Auxiliary to the Rapides Parish Medical Society, at the home of Mrs. M. S. Freiman.

Mrs. Levy, president of the Louisiana Health Council, had as her topic "Your Neighbor's Health Is Your Business." The speaker was introduced by Mrs. D. B. Barber, chairman of the program committee.

Mrs. H. H. Hardy, Jr., was named chairman of the nominating committee which will present a slate of officers at the April meeting. Also on the committee are Mesdames Henry C. Gahagan, John Worley, Noel T. Simmonds and Arthur Seale.

White camellias were arranged in a crystal and silver epergne at the center of the table in the dining room. At the base of the epergne were camellias and valentines. Pouring coffee was Mrs. N. M. Brian, Jr.

Other members and guests attending were Mesdames R. G. Masterson, Clarence Pierson, David Trax, R. B. Wallace, Jr., Raymond Seshul, W. E. Wilkinson, R. E. Rowland, J. A. Worley, John Deming, H. H. Hardy, H. G. Alexander, Harry Q. Gahagan, W. H. Hamilton, Daniel M. Kingsley, O. B. Owens, Cleon Worley of Shreveport, Cora Floore, L. J. Alleman, and E. Preston Ferguson of Natchitoches.

IBERIA PARISH

Among the most important projects of the Iberia Parish Medical Auxiliary is that of its Loan Closet located in New Iberia. The Loan Closet carries all kinds of sickroom needs such as wheel chairs, hospital beds, etc. The equipment has ben in constant use. Additions to it have been made possible by a style show given by the Auxiliary, the proceeds of which went for the benefit of this project. Good publicity through the radio and the newspaper has created interest in the support of the Loan Closet, and has also served to inform people who needed to use it of what was available. The auxiliary feels that it has been a very worthwhile activity.

ORLEANS PARISH

"Doctor's Day" was celebrated by a reception held at the Orleans Club, March 31, at 8:00 P.M., with Mrs. Philips Carter as chairman. The highlight of the evening was the presentation of a donation by the auxiliary to the American Medical Educational Foundation. Receiving the donations were Drs. Sam Hobson, president of Orleans Parish Medical Society, William W. Frye, dean of Louisiana State University Medical School, and Maxwell E. Lapham, dean of Tulane School of Medicine.

The Woman's Auxiliary to the Orleans Parish Medical Society entertained wives of physicians attending the New Orleans Graduate Medical Assembly which met March 2, 3, 4, and 5. Registration for the visiting wives was in charge of the Auxiliary. They were also in charge of an information booth at the Auditorium throughout the Assembly.

On March 3, a tour of the French Quarter was made.

On March 4, a "Carnival Tea" was held at the Orleans Club. For this occasion, the Club was reminiscent of Old New Orleans. Dressed in fiesta costumes and receiving were Mrs. Edwin R. Guidry, Mrs. Charles B. Odom, Mrs. Joseph S. D'Antoni, Mrs. Eugene Countiss, Mrs. Boni deLaureal, Mrs. Daniel J. Murphy, Mrs. Earl Conway Smith, and Mrs. George M. Haik.

The program for the afternoon was the presentation of the following Carnival Queens:

Miss Catherine Walter, Queen of Virigilians, daughter of Mr. and Mrs. Victor Walter.

Miss Elizabeth Philip Blain, Queen of Dorians, daughter of Mr. and Mrs. Hugh Mercer Blain, Jr.

Miss Margaret Delphine Brignac, Queen of Bards of Bohemia, daughter of Mr. and Mrs. Paul Marion Brignac.

Mrs. Thomas C. Creagan, a former queen of Prophets of Persia, daughter of Dr. and Mrs. Aynaud Hebert.

Miss Shirley Mae Claverie, daughter of Mr. and Mrs. Albert P. Claverie and granddaughter of Dr. and Mrs. P. J. Wahl, Queen of the Children's Carnival Ball.

Ladies-in-waiting to their majesties:

Miss Ilene Seale of Sulphur, Louisiana, daughter of Dr. and Mrs. W. K. Seale.

Miss Joel Virginia Russell, daughter of Dr. and Mrs. Howard Hugo Russell.

Dr. Emile A. Bertucci was narrator for the program.

The Woman's Auxiliary to the Orleans Parish Medical Society held its regular monthly meeting and tea April 8, at the Orleans Club. The program for the afternoon included the presentation of prizes to the local high school winners of the essay contest sponsored by the Association of American Physicians and Surgeons. Dr. Edwin L. Zander, National Chairman for the essay contest, made the awards.

During the social part of the meeting, a spring hat contest was held. The theme of the hats was a medical one. Winners were: Most Beautiful Hat, Mrs. Anees Magabgab; Most Original Hat, Mrs. Nicola Tessitore; Silliest Hat, Mrs. Joseph Gregoratti; Cleverest Hat, Mrs. Holly B. Grimm.

SHREVEPORT DOCTOR'S DAY

A lovely party celebrating Doctor's Day was given at the Shreveport County Club by the Woman's Auxiliary to the Shreveport Medical Society with Mrs. P. R. Gilmer as chairman. The ballroom was transformed into a showboat setting. The guests enjoyed a delicious dinner at small tables placed about the ballroom. After dinner, a very entertaining program was given. A number of doctors participated in the original skit written by Mrs. N. J. Bender and Mrs. P. R. Gilmer.

Also in recognition of Doctor's Day, a personal note of appreciation was sent to each doctor by the president of the auxiliary, Mrs. P. D. Abramson. Both daily papers carried good editorials of tribute to the doctors on their day.

Mrs. Leon F. Gray,
Chairman of Press and Publicity.

BOOK REVIEWS

Postgraduate Lectures on Orthopedic Diagnosis and Indications; by Arthur Steindler, M. D. Springfield, Illinois, Charles C. Thomas, 1952, vol. IV, Pp. 318. Price $9.75.

This fourth volume in *Post-Graduate Lectures on Orthopedic Diagnosis and Indications* includes discussion on arthritis and diseases of muscles, bursae and tendons, togther with deficiency and degenerative diseases of the locomotor system. The first section, devoted to the arthritides, has an excellent discussion of the treatment of atrophic rheumatoid arthritis and considers the general therapeutic agents and the specific orthopedic measures most thoroughly. The lecture on inflam-

matory diseases of the muscles contains many excellent illustrations of poorly defined muscular lesions, and the discussion is most thorough concerning the pathology and variety of therapeutic measures. The inclusion of primary neuromuscular diseases in this first section of lectures rather than under deficiency degenerative diseases of the locomotor system seems rather odd. However, the second section was most complete in the discussion of vitamin deficiency, senile diseases of the bone and degenerative bone diseases, known, unknown and poorly understood skeletal lesions. The fourth lecture in the second section appears to be exceptionally well organized and considers the avascular necrosis of the various epiphyses. The second section of the last volume of this series discusses the neuro-arthropathies.

The fourth volume in the series of four continues the same type of methodical cataloging by affectations of the skeletal motor system. In general, the same excellent quality of illustrations characterizes the second and third volume as present. In reviewing the entire work of four volumes the value of this work becomes more apparent. No volume is complete within itself but the decision to divide this large series of lectures into four volumes appears to be a wise one. Taken as a whole, this lecture series represents a monumental encyclopedia of orthopedic pathology and the concept of therapeutic principles of one of the pioneers in postgraduate education in orthopedic surgery.

JACK WICKSTROM, M. D.

Diabetic Glomerulosclerosis; The Specific Renal Disease of Diabetes Mellitus; by Harold Rifkin, M. D.; Louis Leitner, M. D. Ph.D.; and James Berkman, M. D. Springfield, Illinois, Charles C. Thomas, 1952. Pp. 102, illus. Price $3.50.

This interesting syndrome of albuminuria, nephrotic edema, hypertension, and renal decompensation has been adequately studied in a series of patients seen at the Montefiore Hospital in New York City. The authors present the result of their studies on a group of patients. They emphasize the diagnostic value of finding doubly refractile casts in the urinary sediment and the demonstration by the pathologist of intraglomerular hyaline balls. Clinical features and prognostic complications are well covered.

This monograph, one of the American Lectures in Metabolism, can be well recommended to anyone wishing to familiarize himself with the basic manifestations of this syndrome.

SYDNEY JACOBS, M. D.

Diabetes and Pregnancy; by Ralph A. Reis, M. D.; Edwin J. DeCosta, M. D.; and M. David Allweiss, M. D. Springfield, Illinois, Charles C. Thomas, 1952. Pp. 88. Price $2.50.

In this small volume the problems facing the diabetic woman who becomes pregnant are outlined and analyzed. The authors are quite optimistic that an excellent fetal salvage can be obtained by simple reasonable management of both the diabetes and the pregnancy. They do not believe that hormone therapy is particularly effective in preventing toxemia of pregnancy or in increasing the likelihood that the diabetic woman will be delivered of a viable child. They believe that pregnancy should be terminated when the fetus achieves the size of approximately 35 gms., which is usually accomplished by the thirty-seventh week. They advise cesarean section only when the obstetrician decides that delivery cannot be effected quickly and safely vaginally. They further advise that successful management of the new born baby of the diabetic mother demands that it be cared for as if it were a premature baby regardless of actual age, size, and weight.

This small volume presents in precise fashion a considerable amount of information. It is recommended to either the obstetrician or the internist who is confronted with such a problem.

SYDNEY JACOBS, M. D.

PUBLICATIONS RECEIVED

Doubleday & Company, Inc., N. Y.: Children of Divorce, by J. Louise Despert, M. D.

Froben Press, Inc., N. Y.: Heart and Circulation: Diagnosis and Treatment, by Meyer Sclar, M. D, and assisted by Jacob Malnick, M. D.

Grune & Stratton, N. Y.: Chronic Pulmonary Emphysema, Physiopathology and Treatment, by Maurice S. Segal, M. D., and M. J. Dulfano, M. D.

The C. V. Mosby Company, St. Louis: Physiology of Exercise by Laurence E. Morehouse, Ph.D., and Augustus T. Miller, Jr., Ph.D., M. D. (2nd Edit.)

Philosophical Library, N. Y.: The Conception of Disease, its History, its Versions and its Nature, by Walther Riese, M. D.; The Psychology and Psychotherapy of Otto Rank, by Fay B. Karpf.

W. B. Saunders Company, Phila.: Clinical Diagnosis by Laboratory Methods, by James C. Todd, M. D., Arthur H. Sanford, M. D., and Benjamin B. Wells, M. D. (12th Edit.); An Atlas of Surgical Exposures of the Extremities, by Sam W. Banks, M. D., and Harold Laufman, M. D.; Physical Examination of The Surgical Patient, by J. Englebert Dunphy, M. D., and Thomas W. Botsford, M. D. The Anatomy of the Nervous System, by Stephen Walter Ranson, M. D., revised by Sam Lillard Clark, M. D. (9th Edit.); A Manual of Clinical Allergy, by John M. Sheldon, M. D., Robert G. Lovell, M. D., and Kenneth P. Mathews, M. D.; Treatment of Mental Disorder, by Leo Alexander, M. D.; Gifford's Textbook of Ophthalmology, by Francis Heed Adler, M. D. (5th Edit.)

Charles C. Thomas, Publisher, Springfield, Ill.: The Founders of Neurology, by 84 authors and edited by Webb Haymaker, M. D., and Karl A. Baer; Contact Dermatitis, by George L. Waldbott, M. D.